# PACKAGING

## Fresh Cut Meats the Bohack Company's Plan

*(Concluded from Page 6, Column 5)*

With the packaged method, it is possible to make fairly even distribution, and place the various cuts where they are in the best demand.

**(6)—That heavier losses will be sustained on unsold stock, for the reason that cuts lose attractive appearance more readily than uncut meat.**

(A.) The possibility of losses with packaged meat, due to stale products, are much less than under the old method, where the whole carcass, or side, is shipped to a store and represents several days' supply. The butcher has to handle his meat into the box—out of the box—into the case, and back again. Exposed to extreme changes in temperature, there is bound to be a certain amount of deterioration, and that necessitates daily trimming.

Every one connected with this business realizes that tremendous amounts of money go into the scrap can every day, in the retail meat business, just through this constant trimming.

With the packaged method, the whole carcass is cut up and no further trimming is involved. Furthermore, the cutters working under a centralized plan can be watched more closely, and actual loss through wasteful trimming is eliminated.

Kept under even temperature, our Cellophane packaged meats retain all their fresh appearance. I have seen steaks that were held for three days, and did not show the slightest discoloration.

Merchandising fresh meats in packages is particularly adaptable to chain store operation. We have definite control of the product from production to consumer, and can usually handle the situation better than where products have to be presented to the customer through uncontrollable outlets.

The general problems involved in marketing packaged fresh meats, are very comparable to the bakery line. Freshness of condition is all important, and the goods must be turned over daily.

The idea could be commercialized in a big way just as the bread business is. There is no good reason why a daily delivery service, covering a large number of outlets over a large territory, could not be worked exactly the same as the centralized baker handles the bread problem. It may offer the solution for utilizing some of the plants and branch houses throughout the country which present a problem to the big packers today.

The refrigerating problem in the stores, for the handling of "Fresher-Cut" packaged meats, is not very great, since it is not necessary to hold exceptionally low temperatures.

The investment in fresh meat stocks can be spread out over many more outlets than with the old method, which means a considerable saving in interest on investment alone. Through advertising, there is every opportunity to build up a great property and real prestige for certain brands or labels, just as it has been done in the grocery line. Confidence can be instilled in the public because they can be assured of exactly the same quality, handled and prepared in exactly the same way, under an established label, no matter where they may make the purchase. Under the old method, it is utterly impossible to advertise any certain cut, no matter how many outlets you may control, and be prepared in exactly the same style in all the stores.

I would like to see more concerns go into the packaging idea of selling fresh cut meats, providing they all make it a policy to put out only the finest quality, and if they constantly strive to maintain quality.

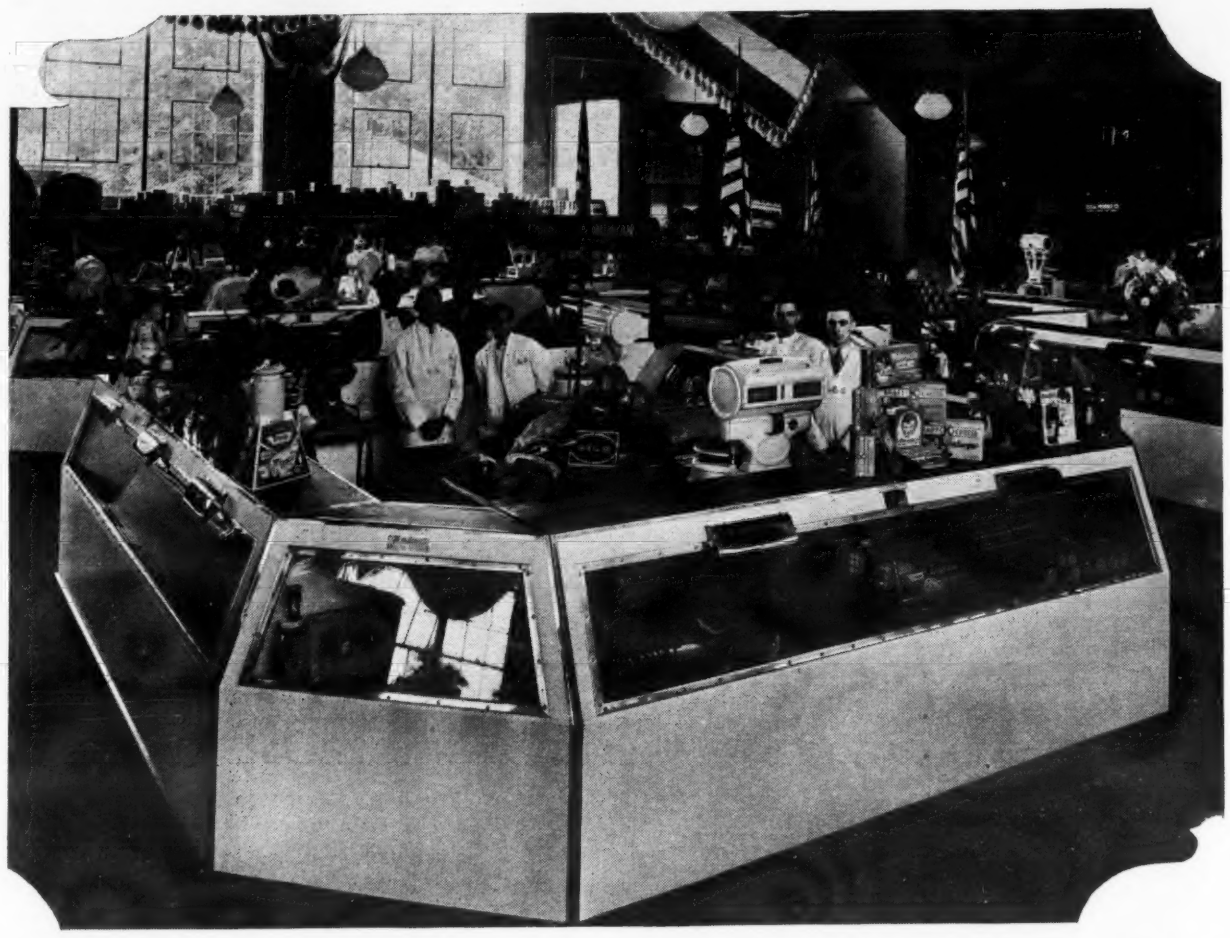
# ICELECT

**Omaha, Neb.**—The IcElect Corporation is actively marketing a new size evaporator for storing ice cream. It is in the elliptical form and is virtually double the size of the cylinders heretofore made. Two five-gallon cans of cream may be placed in the new evaporator, or 11½ gallons when in brick form.

A tie-up has been made with Copeland, and the new storage freezer is now being installed in connection with fountain service where ice cream is served. Sixteen of the new evaporators are now in operation in England. A root beer cooler, constructed on much the same lines, is now being tested at the IcElect laboratory.

Albert Schneider, president of IcElect, had new honors thrust on him July 2. A new city, midway between Omaha and Council Bluffs, has been christened Carter Lake, Iowa. Mr. Schneider was elected mayor of the new city, on an improvement platform. Carter Lake has a population of possibly 3,000.

# *Refrigerated Islands*



**Indianapolis, Ind.**—Modern to the nth degree, the new Ma-Co market recently opened here is completely equipped with Kelvinator refrigeration and Holcomb and Hoke display cabinets.

Seven islands, each having one 10 ft. front display case and two 12 ft. side display cases, comprise the installation. Each island is equipped with a model R-30 condensing unit and standard cross-fin cooling units. In addition to these islands, a 12 ft. vegetable counter is equipped with an F-30 condensing unit and standard cross-fin coils. A 12 ft. floral case has the same equipment.

On a corner lot 130 feet by 235 feet, costing $100,000, the Ma-Co Realty Co. built a market structure of steel and reinforced concrete, with an exterior of Bedford oolitic limestone, at a cost of $250,000. Modernistic architecture completes the picture. Eight-feet-wide private walks surround the building, along with neatly landscaped plots of ground.

The market proper is 105 by 148 feet, containing 84 market stands. Each stand faces an eight-foot aisle. Affording plenty of space for light and air, the whole is covered with a 28-foot ceiling. Three large storerooms and three arcade shops, and a specially-finished studio room, supplement the market, while 12 suites of offices occupy the second floor.

# HUNTSMAN

ONE of the leading authorities on fish and fishing problems is Dr. A. G. Huntsman, employed by the Canadian government as Director of Atlantic Biological Stations. Dr. Huntsman, who makes his residence at the Halifax Station, has made thousands of tests of various methods of preserving fish, and his opinion on the subject of quick freezing is thus founded on long experience. In one of his reports he says:

"Fish that have been neither salted, dried, smoked, nor canned and cooked, but have merely been preserved more or less perfectly by keeping the temperature low, are ordinarily called fresh fish, even though as ordinarily sold, they are decidedly different from fish that are just out of the water. So definite is this difference, that while fish just out of the water have scarcely any appreciable odor, either before or after cooking, the ordinary fish shop, and the ordinary household in which fish are being cooked are recognized at once, perhaps even at some distance, by the sense of smell. This "fishy" odor, which is usually thought to be a necessary characteristic of fish, is the result of decomposition, just as in the case of "high" meat or "ripe" cheese. Ordinarily also frozen fish has a special cold storage flavour, the result of the kind of decomposition that occurs at low temperatures.

"Not infrequently also, frozen fish is dry, tough and comparatively flavourless, as the result of slow freezing and long storage, even though there has been no appreciable decomposition. Further, with improper storage, frozen fish may develop "rust" on the surface, and may dry out, giving a very inferior product in both appearance and flavour.

"As early as 1924, it was found that haddock fillets could be made into cakes, frozen quickly with comparatively simple equipment, and stored for six months to give a product practically indistinguishable when served on the table, from haddock just landed from the boats. This demonstrated the feasibility of having strictly fresh fish of any kind at any time, anywhere."

That last sentence of Dr. Huntsman's sounds like a large order, but if he can really and truly eliminate "that fishy smell" by quick freezing he will have the heartfelt thanks of everyone who likes to eat fish.

## PROMINENT HOTELS GET FRIGIDAIRES

**Stockbridge, Mass.**—Red Lion Inn and Heaton Hall, hotels conducted by Congressman Allen T. Treadway, have been equipped this season with Frigidaire. Two Model C compressors and six 96-F coils have been installed in each hotel. The installation includes Seeger L-44 cabinets, equipment for freezing ice cream and cooling the water used in drinking fountains, etc. L. R. Sweatland, Inc., Frigidaire dealer in Pittsfield, sold this equipment.

The new inn of the Austin Fox Riggs Foundation, Inc., Stockbridge, erected at a cost of $300,000, is being equipped with Frigidaire. The arrangements include a large walk-in refrigerator, ice cream freezer, ice maker and two model AP-18 cabinets in the pantry. L. R. Sweatland, Inc., also placed this job.

# *Crying Need*

**Omaha, Neb.**—The cry for refrigeration equipment for the small ice cream dealer continues in Omaha. Phil Kreml, president of the Whistle Bottling Company, estimates he could increase his sales 15 per cent if there was a small cabinet taking up not over 20 inches of floor space available at this time. Five gallons of cream and two dozen small bottles would be the total contents. Cigar stores and candy shops, where space is limited, would be good prospects.

## YOUNG AND McINTOSH LAND BIG ORDERS

**Memphis, Tenn.**—J. L. Young secured the order for Frigidaire multiple equipment for forty-two kitchens in a new apartment under construction here at Poplar and Clarke Streets by the Dave Dermon Company.

W. P. McIntosh, Jr., closed an order for Frigidaire equipment for a soda fountain, three compressors and necessary coils, salad box, storage box and two combination beverage and water coolers, for the new Stevens Sandwich Shop here.

## LITERARY EFFORTS WIN THEM KELVINATORS

**Kansas City, Mo.**—Mrs. G. S. Sutton won first prize in the *Journal-Post* essay contest on the subject, "Why I Should Have Modern Refrigeration in My Home," and was rewarded with a Model U-7-P Kelvinator by the Kansas City Power & Light Company. Wilfred T. Harris was second prize winner and received a Kelvinator U-5-P from the Western Kelvinator Company. Mrs. Alice M. Hurst received, as a third prize winner, a Kelvinator U-4-P from the Western Kelvinator Company.

## NEW McCRAY MANAGER FOR BIRMINGHAM

**Birmingham, Ala.**—Henry Dunn, district manager for the McCray Refrigerator Sales Corporation, has resigned and has been succeeded by A. W. DeVan.

# MOBILITY

A NEW refrigerator panel truck body has just been placed on the market by the Hercules Products, Inc., subsidiary of Servel, Inc., Evansville, Ind. This body has built into it a refrigerator section which occupies the front half of the loading space. The rear half may be utilized for any purpose. It weighs 2,200 pounds and can be mounted on practically any type of automobile chassis. This body is made for the hauling of meats, butter, cheese, ice cream and other perishable products.

The refrigerator compartment of this body can maintain an average temperature from 40 to 55 degrees, depending on the frequency of icing service and the care taken in the amount of salt used. The refrigerator space has a length of 48⅞ inches, a width of 49 inches and a height of 53 inches. Two-inch walls of sealed insulation, consisting of ply-wood, scutan paper, Dry Zero, another layer of scutan paper, pressed wood and galvanized iron, surround the refrigeration space. All points are sealed with an asphaltum composition.

Entrance to the refrigerator compartment is made by a 22-inch door on the right side of the body. This door is sealed by expansion strips forced in place by springs. The door is fitted on the outside with a compression type of handle. The refrigerator door opening is sealed with a 12-inch hinge baffle at the bottom, which keeps cold air from rushing out whenever the door is opened.

Location of the heavy gauged galvanized brine tank is on the left wall. This is fitted with a hatch type of deck door for convenience in icing, and has a drip pan and drain pipe which passes through the floor.

The rear compartment, which is used for general purposes, is built of solid material and is theft proof, being provided with snap lock on the rear doors. The inside dimensions of this section are: length, 49⅞ inches; width, 60 inches, and height 60 inches.

The driver's compartment is equipped with an adjustable seat on the driver's side. A hinged seat is provided on the right side next to the driver, to permit filling of the gas tank when it is located under the seat. Bodies may be had in several color combinations.

## COLUMBUS, OHIO, BANK BUYS TEMPRITES

**Columbus, Ohio**—The Kelvinator Columbus Company recently made a multiple installation of Temprite coolers in the City National Bank and Trust Company, Columbus, Ohio.

The installation was of Temprite, white porcelain enamel, wall type fixtures, a model designed for banks and institutions.

# ECONOMY

## Is Keynote of Birdseye Advertising

**Springfield, Mass.**—Retailing of the Birdseye Frosted Foods here is proceeding in an uneventful manner, though in satisfactory volume. The midsummer period is hardly a time to look for any marked sales increase, but it is evident in various ways that public interest in the line has not waned. Calls for a lecturer and demonstrator to expound the system have been frequent, and every few days a jump in the sales total at some store suggests that quick-frozen foods have been purchased for a house party in the neighborhood.

Some of the items are in demand for picnics, as the foods can be taken a considerable distance without any loss of palatability. An example of this was furnished by the Birdseye organization at its own outing at Congamond Lake recently, on which occasion frosted foods were enjoyed.

For the fourth successive week the $25 prize offered to the store showing the highest percentage increase of sales went to a neighborhood store in a high-class residential section, the Longmeadow unit of the Thrift Store chain being the latest winner. The weekly prize offerings have been discontinued, temporarily at least.

Several price reductions are observed at the week-end sales. Choice native ducklings are now selling at 45 cents a pound and choice native broilers at 65 cents a pound. Economy in buying these items after they have been drawn and cleaned is stressed in newspaper advertising, as it has been in the case of the lamb roasts. At 29 cents a package, frozen raspberries are selling in competition with fresh raspberries.

Reports that the number of stores handling the Birdseye line might be augmented soon by the addition of members of a big chain system have not been confirmed as yet.

# RECIPE BROODER

**Lewiston, Maine**—Housewives of this vicinity have been making many visits recently to the new Home Service Kitchen of the Central Maine Power Co. in the Androscoggin Electric Co. block.

Space formerly occcupied by an old meter room, a clothes closet, and a small office has been converted into a restful, convenient class room and kitchen. Decorated in a color scheme that includes soft green, buff, dull orange, ivory, and black, the kitchen is said to be one of the most attractive of its species in all New England.

Prominent among the electrical appliances on display in this model kitchen is a General Electric refrigerator placed conveniently a step or two from the sink or cupboards. The steel cabinet, electric range, and "kitchen aid" are on the right, placed so that the cook can save steps by circling her kitchen in the progressive preparation of a meal according to Henry Ford's best "line production" methods.

Directly over the sink is an oil painting of typical Maine scenery, with a rock garden, trees, water, and hills all in the scene. A novel artificial lighting idea enables one to flood the landscape with either sunlight or moonlight, merely by pressing a button.

Half of the entire space is devoted to a class room and reading room, where magazines and books devoted to homemaking may be found.

Also present is a filing case crammed full of recipes, where the harassed meal-planner may find new dishes to vary her shopworn menus.

The class room is easily converted into a reception room by swinging back the heavy doors separating it from the kitchen.

# MODERNIZES

**Milwaukee, Wis.**—Finding that ice did not give proper service, there has recently been installed in the R. Pazik delicatessen shop a Gibson refrigerator with Frigidaire unit. It is a large commercial unit which is placed in the store so that all may see it. Mr. Pazik has besides this a Leser counter with another Frigidaire installation. In this are kept the smoked meats, sausages, fish and cheeses.

Immediately next door to the delicatessen store Mr. Pazik is now opening a restaurant in which a Frigidaire is also used, as well as a unit which cools the drinking water. The Pazik store is known all over this city for its fine delicatessen goods.

The meats which have won wide renown, more than any others, are his special Cudahy Bros. baked and cooked hams. The temperature in the commercial refrigerator is kept at 35 degrees.

In Three Parts—Part 1

# ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office.

The business newspaper of the refrigeration industry

ISSUED EVERY TWO WEEKS
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TWO DOLLARS PER YEAR

## MAJESTIC PROMISES AUGUST APPEARANCE IN NATIONAL MARKET

### Grigsby-Grunow Product Has Been Awaiting Machinery

**Chicago, Ill.**—The month of August will see the new Majestic refrigerator on the market, according to Herbert E. Young, vice-president in charge of sales of the Majestic Utilities Company, the offshoot of the Grigsby-Grunow Company, organized recently to handle the production and sales of refrigerators.

Delay in the installation of the necessary machinery has been largely responsible for the postponement of actual production from the time first announced, but the new machinery, costing several million dollars, is now in place and practically ready for operation.

Refrigerators in small quantities already have been shipped to distributors, Indianapolis, Indiana, and Lincoln, Nebraska, being among the cities favored with early shipments.

An active field force has been organized by Mr. Young to take charge of refrigerator sales under his direction, and as soon as the Majestic unit is actually on the market an intensive sales campaign will get under way. If the policies of the Grigsby-Grunow organization are followed (and there is every reason to believe that they will be, for Mr. Young has been in charge of that organization's radio sales) the Majestic refrigerator campaign will be nation-wide, and will command public attention in every section of the country.

No announcement of the price of the Majestic refrigerator has been made thus far.

## BUSY PROGRAM ARRANGED FOR CAMP REFRIGERATION

**Cleveland, Ohio.**—Intensive fall activities will be planned by the electric refrigeration department of the General Electric Company at Camp Refrigeration IV, which is to be held at Association Island, August 20 to 23, inclusive.

Committees are working out final details for the business program at the camp, which will be attended by officials of the department, distributors and keymen from all sections of the country. Emphasis at this year's meeting will be placed upon the commercial line, although all other divisions will have a prominent place on the business session program.

With sales for the first six months of this year far ahead of last year, T. K. Quinn and P. B. Zimmerman, manager and sales manager, respectively, are anticipating even a better showing for the final six months of 1930. The August meeting will serve to sound the keynote for the fall and winter drive for refrigerator business.

A July sales contest, aimed at increased commercial business, is just closing. The country was divided into ten districts for contest purposes, and the district leading in commercial sales for July will be given special honor at Camp Refrigeration.

While the camp will be primarily for discussion of business and new sales campaigns, it will not be without fun. Special committees are arranging entertainment programs for the campers. Harry C. Mealey, assistant to Manager Quinn, will act as camp manager.

## TOLEDO EDISON WINDS UP SUCCESSFUL SALES DRIVE

**Toledo, Ohio**—The Toledo Edison Company, General Electric and Frigidaire dealers in the Toledo territory, has just concluded one of the most successful campaigns ever put on by the company. The campaign was begun on May 12 at a dinner in one of the local hotels. The salesmen pledged themselves to secure $500,000 worth of new business during the 52 days of the campaign. The campaign closed on July 12 and according to J. E. Fanning, manager of the electric refrigeration department, the company had exceeded its quota by $52,000. He said that more than 1,400 refrigeration units had been installed in Toledo homes and in commercial buildings during the 52-day period.

In addressing the salesmen at a victory meeting on July 14, Mr. Fanning said that business is good. "The best indication and proof of that fact lies in the success of the campaign. Some cries from outside sources that business is going to the dogs reminds me of a story that appeared in a national magazine. Directors of a prominent corporation were complaining that their business was 'going to the dogs.' One director asked his fellow members of the board what would happen if business should be like a dog running through the woods. His explanation was that when the dog is half way through the woods, he is on his way out.

"So you see, business is good for those who go after it," Mr. Fanning declared. "Nearly everyone has money and is willing to spend it for an article such as an electric refrigerator, rendering service, protecting investment and safeguarding health."

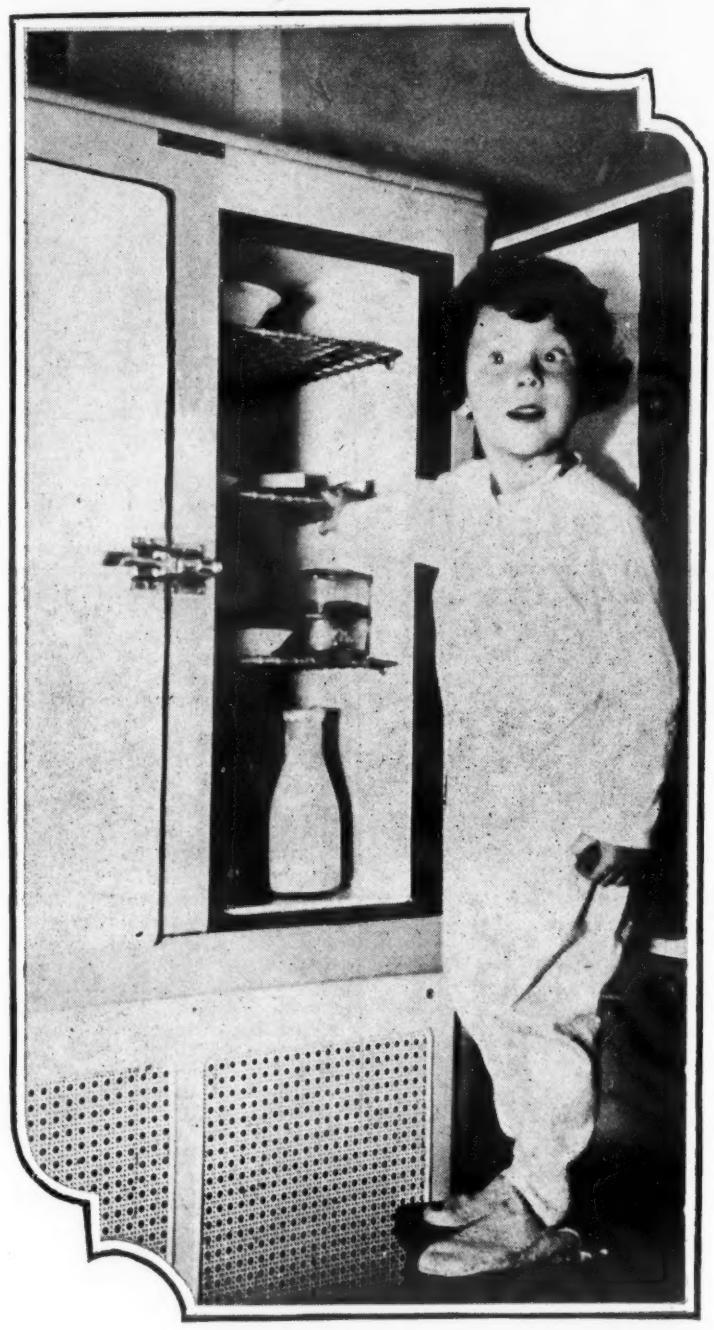
## BEHIND THE LINES

**EVERY soldier worthy of the name knows that many of the most effective factors in the success of a campaign never are mentioned in dispatches. Those "sinews of war" without which victory is impossible seldom receive much notice in the headlines.**

**In the "Pink Section" which is part of this issue of "Electric Refrigeration News," the "supply service" of the refrigeration industry is accorded its due. The various office appliances which are never seen by the customer, but which nevertheless play such an important part in the success or failure of a sales campaign, are described and pictured. The quiet indispensables have their innings.**

**Electric refrigerators are wonderful things, but no one has been able to teach them to walk. The next "Pink Section" will tell about Trucks.**

## *"Oft in the Stilly Night"*



Young Mr. Cox went to the Servel once too often—Daddy got him.

## KELVINATOR STATEMENT SHOWS INCREASED PROFITS

**Detroit, Mich.**—By reason of its report covering the last nine months which has just been issued, the Kelvinator Corporation proves its right to a front rank position among the manufacturers who are keeping the refrigeration in the public eye, as one of the small group of industries that are keeping well ahead of last year's sales records. The statement shows that its net profit for the period covered, ending June 30th, 1930, is $2,112,964.98. For the previous nine months the net profit was $1,301,657.88. The complete statement follows:

| | 1930 | 1929 |
|---|---|---|
| Gross Profit .... | $6,139,627.35 | $4,871,780.72 |
| Total Operating Expenses .... | 3,528,588.80 | 3,073,037.04 |
| Operating Profit ..... | $2,611,038.55 | $1,798,743.68 |
| Other Deductions ... | 422,607.69 | 497,085.80 |
| Profit Before Tax.. | $2,188,430.86 | $1,301,657.88 |
| Provision for Income Tax .. | 75,466.88 | ..... |
| | $2,112,964.98 | $1,301,657.88 |

Kelvinator reports net profit after all charges for the nine months ended June 30, 1930,—$2,112,964.98, which compares with the nine months ended June 30, 1929, of $1,301,657.88.

For the quarter ended June 30, 1930, net profits, before a provision for possible Federal income taxes, were $1,489,933.02, which compares with a similar profit for the same quarter of 1929 of $1,441,803.41. Net after provision for possible taxes for the 1930 quarter was $1,414,467.14.

The above profits do not include the earnings of the Corporation's subsidiaries—Refrigeration Discount Corporation and Kelvinator of Canada, Ltd.,—for the above period. There are no bank loans outstanding, and the ratio of current assets to current liabilities is better than eight to one.

## WASHINGTON ART STUDENTS TO DESIGN DISPLAY

**Seattle, Wash.**—Students enrolled in the University of Washington Art School will soon test sprouting artistic wings by competing in an Electrolux window design and display contest.

The Seattle Gas Co. has made tentative arrangements with school officials for the contest; and if plans come to fruition, the prize designs will soon be featured in Seattle store windows.

## *WARNING*

WORD has come to ELECTRIC REFRIGERATION NEWS that a man calling himself E. J. Smith has been soliciting subscriptions for this publication without authority, and collecting money for which he gives spurious receipts. His most recent operations have been among Grigsby-Grunow dealers in Ohio.

As this issue goes to press, it is said that he has been put under arrest in Dayton, but as that may not be the case, the NEWS warns prospective subscribers to look out for him. Anyone who has paid him for a subscription for ELECTRIC REFRIGERATION NEWS, and has not received copies of the paper, are requested to write at once to ELECTRIC REFRIGERATION NEWS, 550 Maccabees Building, Detroit, Mich.

## COPELAND'S NEW HAVEN BUSINESS IS FLOURISHING

**New Haven, Conn.**—Copeland business in this territory for 1930 to date is 147 per cent ahead of the same period in 1929, according to L. F. Ganter, of the New Haven Electric Company, Copeland distributor for most of the Connecticut territory. A meeting of Bridgeport salesmen was held at the offices of the L. M. Reed Corporation, 347 Fairfield Avenue, Bridgeport, recently, which was so successful that it was decided to hold a monthly gathering. "Pep talks" and refreshments featured the session. The New Haven Electric Company now has 63 dealers in its territory.

Copeland commercial sales in this territory are moving along rapidly, and a brief glance over the recent installations shows that a variety of firms are ordering equipment. The grocer, restaurateur, dairy man and florist are finding electric refrigeration beneficial to their business. The recent installations are as follows:

Mack Lunch, 313 Stratford Avenue, Bridgeport, restaurant box with H compressor, 53H coil; M. A. Caserio, grocer of 618 Newfield Avenue, Bridgeport, restaurant box with R condensing unit and 66 S. I. unit; Victory Lunch, Grand Street, Waterbury, R condensing unit with special water-cooling coil and coil for restaurant box; Sperl, florist, 669 Dixwell Avenue, New Haven, H condenser unit and 72V coil, to be installed in special florist display cabinet; W. E. Moran, delicatessen, 1327 Whalley Avenue, New Haven, walk-in cooler, 54C and 53G coils, R. W. compressor; Palace Restaurant, 447 Main Street, Winsted, restaurant box, 54C coil, R compressor; Conney Bros., Derby, 6-can Victor and 6-can standard milk cabinets, R compressor.

The first of a series of Copeland installations for the National Economy grocery chain has been made in the North Stonington store, using an R condensing unit and an 86 C coil.

## DAYTON COMPANY TAKES OVER FLEXOTRAY RIGHTS

**Dayton, Ohio**—The selling and manufacturing rights for Flexo Trays have been purchased by the Inland Manufacturing Co. of this city from G. M. Dwelley, Inc., former exclusive distributors, Detroit, Mich. Proposed plans indicate that the Inland company will sell Flexo Trays direct to manufacturers and allow them to direct the distribution of rubber ice cube trays manufactured for their refrigerators.

Arrangements have been completed with the General Electric Co., Electric Refrigeration Department, Cleveland, Ohio, whereby this company will distribute Flexo Trays for use in General Electric refrigerators.

## RENTAL PLAN MAKES FAVORABLE START IN REFRIGERATION FIELD

### Latest Venture Undertaken by Experienced Organization

**Johnstown, Pa.**—The rented refrigerator has made its appearance here, and from all reports is proving a popular citizen. Steele's, a merchandising organization with more than twenty years of experience behind it, introduced the rental idea about two months ago, and it took hold at once.

Display advertising in local newspapers carried the first announcement, which attracted citywide attention and brought a flock of inquiries. The advertisement put its emphasis on the ease and convenience of the rental plan, its freedom from delivery and service expense, and left the question of price for the first interview. The advertisement also stated that refrigerators made by the Bryant Electric Refrigerator Corporation would be supplied.

Most of these rented refrigerators are of two sizes, one with a net food storage capacity of 4 cubic feet, and the other a 5 cubic foot box. The four-foot boxes are rented for $4.00 per month and the five-foot boxes for $5.00 per month. In the case of larger boxes $1.00 per month is added for each foot of net space.

The prices mentioned are based on a year's rental, and a slightly different scale has been arranged for customers desiring refrigerators for shorter periods. This scale begins with a charge of $6.50 for a four-foot box for the first month, $6.00 for the second month, and so tapering down to $2.50 for each of the last four months if the refrigerator is kept for a year. The total for twelve months is $48.00, exactly the sum charged if the refrigerator is rented on a yearly basis from the start. Larger boxes are charged for at a higher rate, determined by their size.

Customers who desire to purchase the rented refrigerators are permitted to do so, and get full credit for the sums paid as rent, less 10 per cent for the first year, 20 per cent for the second year, and so on in proportion.

Mrs. Mary B. Steele makes some interesting comments on the success of the rental plan.

"The freedom of responsibility to the purchaser with the option to purchase has been a big factor," she says. "Many salesmen have asked us why the public would rent a box instead of buying one and we find the above to be the best answer to that question. Most of our clientele has been of high grade, people who could buy a box if they so desired, home owners, people of position financially and socially, are among our renters for the following reasons.

"The public is not satisfied that refrigeration is nearly perfected and would rather fill the gap on a rental basis until the experimental stage is past. We also have customers with summer homes, camps, also there are superintendents and managers who may be transferred from place to place.

"Over a period of twenty years of renting pianos, real estate, automobiles, etc., we have found that reduced earning power increases rental possibilities. We are confident that the rental proposition offers large possibilities for distribution of the lesser known products. Name values are not essential to a rental program."

In closing Mrs. Steele, says, "We have had many criticisms on the idea from merchandisers, many of them from men outside the refrigeration field." She also adds that the response to the advertising was so great that the supply of refrigerators was soon exhausted, and that as the manufacturer first patronized seemed unlikely to be unable to meet the demand, Steele's was looking for other sources of supply.

## MORE LOUISIANA SALESMEN FOR FRIGIDAIRE

**Shreveport, La.**—Steady increase in the volume of business and larger prospects have resulted in the addition of ten men to the sales force of the Automatic Refrigeration Company of Shreveport, distributors of Frigidaires.

The territory of this company covers five parishes of North Louisiana, and the company now has 18 men at work on its sales force.

## "It was built by BOHN"

The name BOHN is our warranty that the finest materials obtainable have been utilized by skilled craftsmen and refrigeration engineers to build for you this beautiful and scientific product—an all-porcelain BOHN refrigerator.

BOHN installations include many of the leading hotels, restaurants and hospitals in America.

BOHN refrigerators are used exclusively on all Pullman-built railway dining and buffet cars.

The United States War Department has purchased hundreds of all-porcelain BOHN refrigerators for our army barracks and battleships.

In choosing BOHN refrigerators, discriminating home owners throughout the country have given BOHN a representative list of which any manufacturer might be proud.

*The handy base cabinet may either be used for refrigerating machinery or the storage of cooking utensils, canned goods, vegetables, etc.*

Write for details of the remarkably low prices that are now prevailing.

**BOHN REFRIGERATOR COMPANY**
SAINT PAUL, MINNESOTA


# Thousands of Eggs Cooled by Frigidaire

### Progeny of Peach Moth Undergo Strange Development

**New Haven, Conn.**—Offhand, there would appear to be a wide gap between wormy peaches in an orchard and electrical refrigeration, but at the Connecticut Agricultural Experiment Station, on a lofty hill overlooking this city, the two are definitely connected. In the cellar of the station's administration building, a Frigidaire is busily engaged in keeping untold thousands of minute eggs from getting hot and bothered and so hatching prematurely.

The agricultural experimenters' drive against the Oriental peach moth, scourge of orchards the country over, makes an interesting story. The peach moth is a particularly annoying critter, that lays its eggs in peaches. The eggs hatch and the resultant grub goes to work on its particular peach with disastrous results. Everything from pink spraying fluid to blue language had been tried on the peach moth with little effect, until the Connecticut entomologists got busy.

From granaries and corn-cribs a vast horde of grain moths (which, obviously, feed on grain) are gathered and blown into trays behind a gauze screen, and there allowed to breed. After 30 days, the life cycle of mothdom, the air blast from a vacuum cleaner is reversed and the moths blown out of their quarters into tin cans with gauze roofs.

The tin cans are placed in a special incubator having a steady temperature of 80 degrees Fahrenheit. Left in here four days, the moths lay their eggs on the bottom of the can. The moths, having provided (so they think) for countless thousands of more moths like themselves, pass out of this vale of tears and on into whatever Valhalla is reserved for righteous insectdom. But a dirty trick is played on the poor little things, as will be seen later. The eggs they so confidently left behind are shellacked to small round cardboard discs and placed in another special incubator, where they are exposed to adult living parasites.

The mask has just one purpose. It protects the wearer from importing moth eggs into his lungs.

Bright lights glow under a glass shelf on which the egg-laden discs, face down, are set in round-bottom glass trays. Attracted by the light, the parasites, which are so small as to be barely visible to the naked eye, climb down among the moth eggs and parasitize them. After the process of parasitization has taken place, the egg-discs are removed and set in trays, which then go into the yawning maw of the Frigidaire for cold storage until the time for shipping comes.

A steady temperature of 50 degrees Fahrenheit is maintained in the box, which is of standard commercial type with a ⅓ h. p. unit. The eggs remain cool and comfortable, though a little crowded (10,000 to a two-inch disc) within the Frigidaire until ready to be shipped to peach-growers. Three weeks is the maximum time the eggs may be kept in cold storage.

Shipped to the growers, the discs are hung in peach trees. Four days elapse, and the eggs hatch, but not grain moths. Peculiar looking flies emerge from the eggs. These are hybrids, caused by the union of the grain moth eggs and the parasites. Not what their fond parents hoped for at all.

The hybrid flies do a few zooms and nose-dives around the orchard and then settle down to a serious hunt for peach moth eggs. Finding them, the "mongrels" go to work and lay their own eggs in the eggs of the peach moth. "Ah, ha!" the reader says, "I see it all now; they kill off the peach moths by destroying their eggs." But they don't—that's the funny part of it. The flies wouldn't want to do anything mean like that. Young Mr. Peach Moth gets the surprise of his life when he pokes his head out for the first time and finds that he isn't a peach moth at all, but an insect of a different order created by the merging of the eggs. The new creation scorns peaches and is entirely harmless to all vegetation.

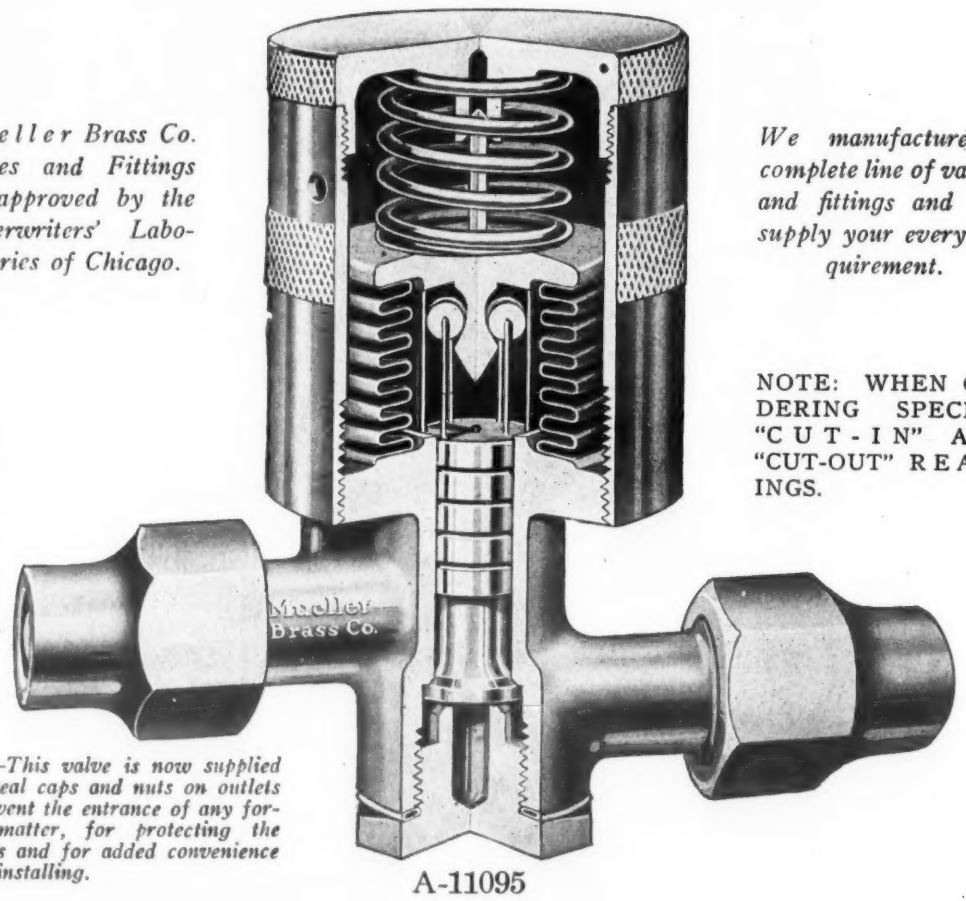
That, in short, or perhaps not so very short, is the story of the peach moth. This method of attacking a pest which threatens the very life of America's peach-growing business would scarcely have been possible were it not for the absolute temperature control of electric refrigeration. Temperatures are an extremely important part of the delicate experimentation and labor which accompany the entomological feat in this instance.


# MUELLER
## *Two-Temperature Control*
# SNAP VALVE

*Mueller Brass Co. Valves and Fittings are approved by the Underwriters' Laboratories of Chicago.*

*We manufacture a complete line of valves and fittings and can supply your every requirement.*

NOTE: WHEN ORDERING SPECIFY "CUT-IN" AND "CUT-OUT" READINGS.




*Note—This valve is now supplied with seal caps and nuts on outlets to prevent the entrance of any foreign matter, for protecting the threads and for added convenience when installing.*

A-11095

This valve is so constructed as to make it a real aid to the service man. By merely turning the outside knurled case he can raise or lower the temperature without danger of losing the differential which was previously properly set.

The differential is built into the valve and cannot be changed.

The temperature range may be changed without the necessity of a recheck or numerous visits of the service man.

Simplicity of construction insures a long and trouble proof life.

The snap action feature prevents seat erosion and assures uniform performance.

The body is a brass forging, thus making it seep proof and free from defects.

**Mueller Brass Co.**
PORT HURON, MICHIGAN
THREE GENERATIONS OF BRASS MAKING


## NEW KELVINATOR DEALERS IN N. Y. TERRITORY

**New York, N. Y.**—W. O. Crabtree, manager of the New York Kelvinator branch, reports progress in operations in the big Metropolitan territory.

"During the early part of the year we added approximately 28 new dealers in the territory," he states. "During the last two months we have entered into arrangements with the New York Edison Companies—United Electric & Power Co., and the New York and Queens Electric Light & Power Co. These associated companies of the New York Edison Company have 28 metropolitan showrooms in which we have displays.

"We also have entered into arrangements with the Davega Sporting and Radio Stores, operating 23 metropolitan stores. We also signed a contract last month with the Morrison Electric Co., operating 12 stores.

"This gives us 91 new dealer connections which we have closed this year. We expect to make it more than one hundred dealer outlets before the close of 1930."

## WESTINGHOUSE EXPANDS TO NASHVILLE FIELD

**Nashville, Tenn.**—Distribution of Westinghouse electric refrigerators has been extended to this territory with the Braid Electric Co., wholesale distributors of radio and electrical equipment, taking over the franchise.

To facilitate the Westinghouse distribution, the Braid company has organized a separate sales organization known as the Gambill Refrigeration Company. This organization is now operating under the direction of C. W. Phillips and dealers are being appointed in the territory. Headquarters for the new organization have been established at 107 9th Ave., S., Nashville.

## REFRIGERATION MIXES WITH MUSIC

**Atlanta, Ga.**—The Phillips & Crew Piano Company, one of the oldest music houses in Atlanta, has secured the local agency for the Copeland electric refrigerator. Although music houses all over the south are entering the electric refrigeration field, Phillips & Crew are the first Atlanta music house to take up this line of merchandise.

## BIG CINCINNATI APARTMENT BUYS REFRIGERATORS

**Cincinnati, Ohio**—The new Ravenswood Apartments in this city are to be equipped throughout with General Electric refrigerators, according to the Milnor Refrigeration Co., G. E. distributors. The apartment building will cover more than an ordinary city block in street frontage, being 420 feet long.

## CONFERENCE PLANNED FOR G. E. APARTMENT MEN

**Cleveland, Ohio**—Announcement has been made by J. J. Donovan, manager of the apartment house division of the electric refrigeration department, General Electric Company, that the apartment house sales conference will be held August 25 and 26 at Schenectady, N. Y.

# *Millions are learning they* CAN afford one!

**The MONITOR TOP SAVES YOU MONEY**

*Before you buy know why!*

## Millions *are being shown the true* economy *in owning the refrigerator with the* MONITOR TOP

—learn how you can make capital from this demand in your store!

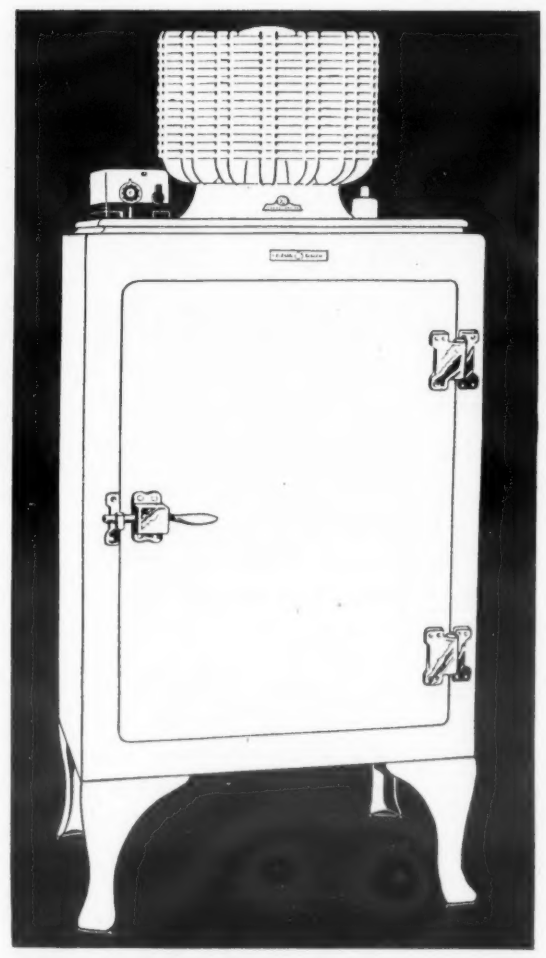
**"I can't afford it." Have you ever heard that? You'll hear it less and less each day!**

**That's because we are educating them—through intensive advertising and merchandising campaigns about the Monitor Top, and how it actually *saves* money for the owner of a General Electric Refrigerator.**

***Note this Distinctive Sales Promotion Work that Builds Sales in Your Store***

**All kinds of consumer advertising are being used—newspapers, magazines, radio, outdoor boards. *But, in addition*, we offer you on a cooperative basis a most effective *direct* mail campaign for your own prospects, together with store displays, window displays, store identification material and other sales promotional helps designed to win sales for you.**

**Be sure to make capital of this tremendous new market opening up—the millions of families in modest circumstances who thought "they couldn't afford it." They are finding out that they *can* afford it—that the Monitor Top *saves* them money. That its efficient, dependable operation saves their food and milk, gives them their ice cubes, and frozen desserts, and all the benefits of electric refrigeration *at a cost of a few cents a day!***



**Join us in the General Electric program, broadcast every Saturday evening in a nation-wide N. B. C. network.**

# GENERAL ELECTRIC

## ALL-STEEL REFRIGERATOR

**ELECTRIC WATER COOLERS - COMMERCIAL REFRIGERATORS - ELECTRIC MILK COOLERS**

ELECTRIC REFRIGERATION DEPT., GENERAL ELECTRIC CO., HANNA BLDG., 1400 EUCLID AVENUE, CLEVELAND, OHIO

# IT'S HERE

***It's Beautiful***

**The NEW WAYNE ELECTRIC REFRIGERATOR**

•

***Complete With Cold Control . .*** **$149.50 List**

A proven high quality compressor with hold-over brine tank in a beautiful Seeger cabinet shipped complete in one package.

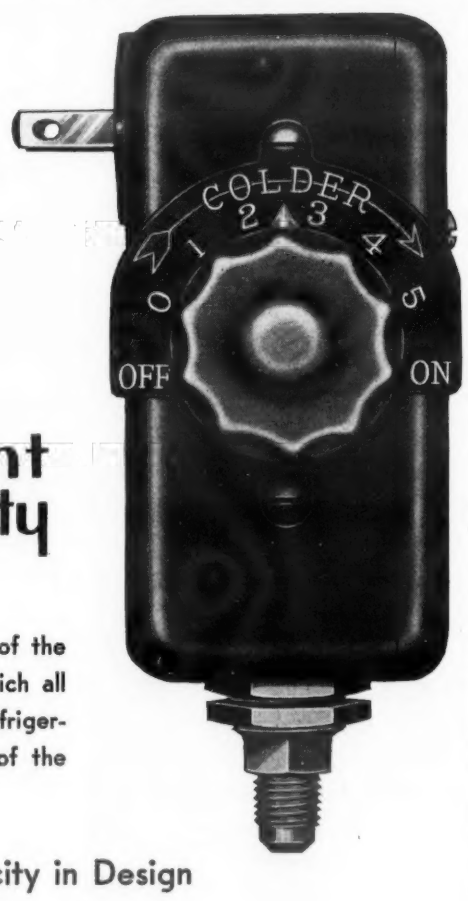
THE WAYNE HOME EQUIPMENT CO., FORT WAYNE, INDIANA

**WAYNE ELECTRIC REFRIGERATOR**



# PENN TYPE 'J' *Unit Control*

*FOR DOMESTIC REFRIGERATORS*




*Anew* / achievment in Simplicity

SIMPLICITY. The trend of the times. The standard for which all manufacturers of electric refrigerators are striving. The keynote of the new Penn Type J Unit Control.

## Simplicity in Design

.....One dial gives complete control.
.....Its half circle movement, lowers temperatures to suit manufacturers' specifications.
.....It provides the means for starting and stopping for defrosting.
.....It is also reset button when thermal overload protector has opened the circuit.
.....For further convenience, Type J has been designed for easy and quick adjustment of both the range and differential.

## Simplicity in Construction

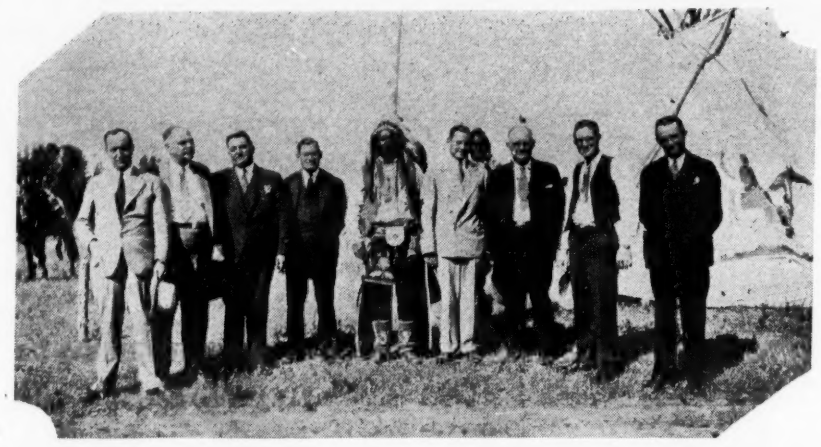
Through the use of Bayonet type contacts the wiring is quick and accessible, and may be done without entering the switch. The mounting, too, is simple, easy, and convenient with only one locknut to secure it to the supporting bracket. The entire mechanism is amazingly compact, attractively finished, and unusually adaptable to domestic units. Rated for a maximum of 1/3 H. P., A. C. or D. C., and may be secured in a variety of models to meet all domestic refrigeration requirements, and special applications.

To quicken your sales, and simplify your unit even more, adopt the new Penn Type J Unit Control as standard equipment, just as some of the largest and best known manufacturers in the industry have done already. Send now for complete specifications.

**PENN ELECTRIC SWITCH CO.**
DES MOINES, IOWA

Type J is the conception of Penn Engineers, recognized throughout the electric refrigeration industry for their outstanding ability.


# G. E. Chieftains on the Reservation



**Hardin, Mont.**—Evidence that the Indians are interested in refrigeration was found by P. B. Zimmerman and W. J. Daily, sales manager and sales promotion manager, respectively, of the electric refrigeration department, General Electric Company, when they recently visited the Crow Indian Reservation near here. The red men like the electric refrigerator.

In company with F. B. Connelly, president of the F. B. Connelly Company, General Electric distributors at Billings, Mont., and others of Mr. Connelly's organization and Ben C. Ritter, General Electric refrigerator representative, Mr. Zimmerman and Mr. Daily visited the reservation on the day that the Indians were celebrating the anniversary of Custer's last stand, which took place a few miles from the Crow reservation.

In this town, A. Knowles, district manager of the Montana Power Company, has sold eighteen General Electric refrigerators this year to date. The population of the town is only 1,300.

Max Big Man and Russell White Bear, leading tribal Indians, are both graduates of Carlisle. Those in the accompanying photograph include Kenneth Connelly, Billings, Mont.; Ben C. Ritter, Salt Lake City, Utah, district G. E. representative; Frank Connelly, Billings; Walter J. Daily, Cleveland; Max Big Man; P. B. Zimmerman, Cleveland; F. B. Connelly, Billings; A. Knowles, Hardin; and Glen Connelly, Billings.

## WELCOMES COMPETITION OF BIG POWER COMPANY

**Waynesboro, Ga.**—E. G. Morris, proprietor of the Morris Hardware Company and pioneer dealer in electric refrigeration in Waynesboro, Georgia, is one dealer who finds the keen competition of the big power company that has lately opened a branch store in his town an asset rather than a liability.

"When a big, responsible concern with millions back of it like the Georgia Power Company gets behind the electric refrigerator and pushes it for all it is worth, everybody becomes acquainted with electric refrigeration and they will have it in their homes now if not later," explained Mr. Morris.

"The power company sends young salesmen into the homes of every local customer and urge them to buy one of these machines as a matter of economy, health and convenience. They keep a large stock on hand and do extensive advertising.

"Their work creates a demand for electric refrigerators that I would never be able to do if I had the field to myself.

"The power company, of course, makes many of the sales. But not all. There are many who prefer to buy from me because of personal friendship or who prefer to buy from a local store rather than a big out-of-town corporation when the price is the same. The work of the power company gets them in the buying notion, and they come to me and make the purchase.

"There is another thing in my favor that might be overlooked. The people out in the country who have no electrical service are led to want the same kind of refrigerators the people in town have, but can't buy from the power company. So I sell them oil operated refrigerators which gives them just as good service as anybody in town can get.

"I have no quarrel with the power company because they are selling refrigerators to some of the people I might sell. Their competition, I find, is of a most desirable sort."

Four years ago the Morris Hardware Company went in for refrigerators as a means of offsetting the summer slump in radio. The new line gave the radio salesman a good and profitable spring and summer seller and made his work profitable throughout the year.

A little later the Morris store started selling oil operated refrigerators, and found this line a profitable seller to its rural customers.

"Before I decided to go in for the sale of electric refrigerators," said Mr. Morris, "I bought one to try out in my home. It hadn't been there long before I realized that we couldn't get along without it. We decided that we wouldn't give up our electric even if we could get ice free."

## BOSTON WINS BIG BATTLE OF KELVINATOR BRANCHES

**Detroit, Mich.**—During the month of June Kelvinator conducted a sales contest among its branches, each of whom had a sponsor at the factory. Vice-President Burritt chose New York, Sales Manager Sayre took Boston, Advertising Director Earl Lines picked Cleveland, Sales Promotion Manager Vance Woodcox selected Detroit, H. K. Lyons, manager of Orders and Distribution, put his faith in Philadelphia.

As the battle waged hot the various sponsors, rooting for the branch of their choice, got to wagering on their respective chances. The upshot was that an agreement was made that the winning branch would be banqueted at the expense of the sponsors of the other branches.

Boston Branch, under the management of Harry Troutwine and sponsored by J. S. Sayre, won the contest. The date of the feast has not yet been set. The race was a close one, with Detroit coming second.

## HOST OF REFRIGERATORS AT THE SPRINGFIELD FAIR

**Springfield, Mass.**—Practically every line of industry and commerce will be represented in the Industrial Arts division of the 14th annual Eastern States Exposition from Sept. 14 to 20, inclusive.

Space reservations by Industrial Arts department exhibitors were 15 per cent greater July 1 than on the corresponding date last year. Approximately 70 per cent were 1929 exhibitors returning again this season. Many new numbers produced during the last twelve months will be given their premier showing at the Eastern States Exposition.

The prospect of a decided upswing in business during the early fall, and an opportunity to reach a wide and prosperous New England market, has been responsible in a large measure for the early demand and sale of exhibition space this season.

Among the new structures added to the Exposition group of permanent buildings this year is the New Hampshire State building on the Avenue of States. This was authorized by legislative act in 1929, and is now in process of construction. It will be completed Sept. 1, and will be dedicated on Tuesday, Sept. 16.

The New Hampshire State building is of early Georgian architecture; of brick, steel and granite, and will cost approximately $60,000, of which $25,000 was appropriated by the state, the remainder being raised by public subscription.

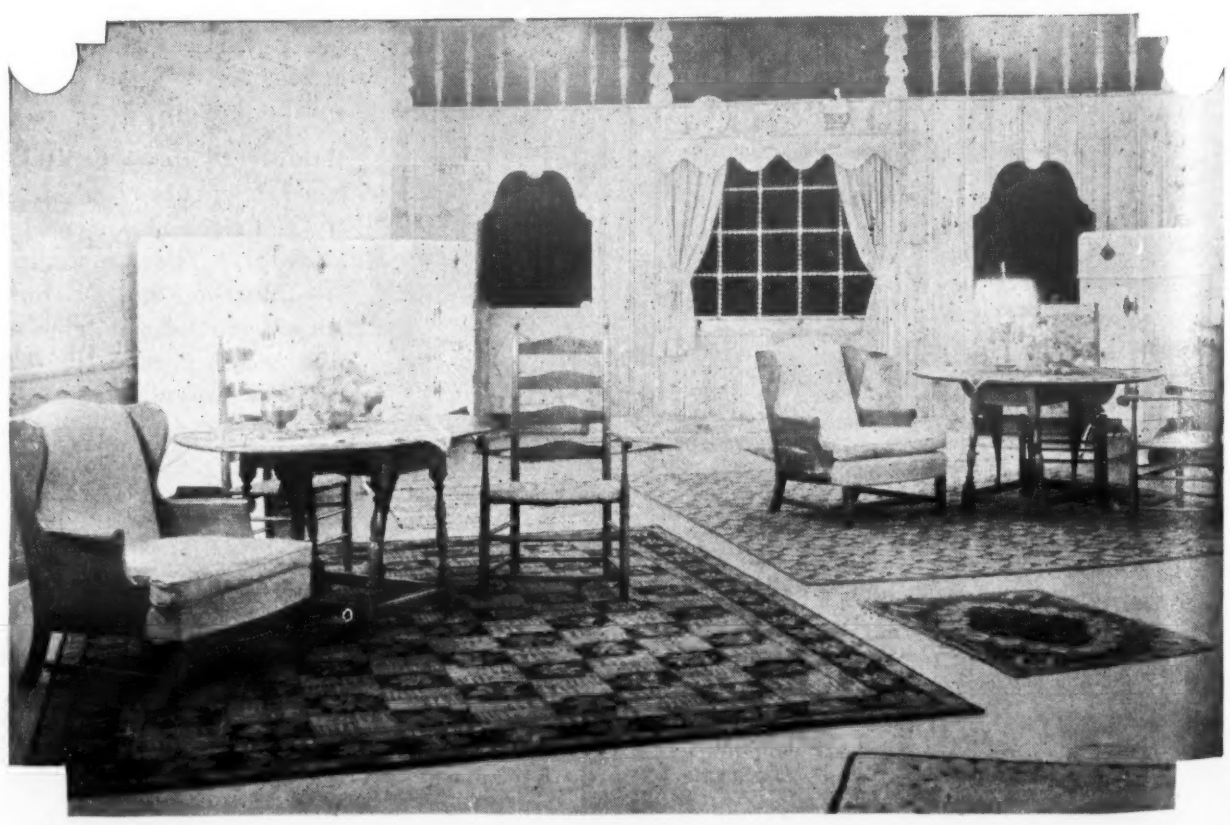
It will be used to portray the agricultural, industrial, natural and recreational interests of the state. Other state buildings include those of Maine, Massachusetts and Vermont.

Another notable development has been the completion of Storrowton, a New England Colonial village, the gift of Mrs. James J. Storrow, of Boston. This consists of nine early New England structures, furnished in period and grouped about a typical village green or common.

Storrowton has been open throughout the summer as a feature of the Massachusetts Bay Tercentenary observances, and will be utilized during the Exposition for Home Department programs and activities.

As reported in the June 4 issue of the NEWS, each of these homes has been taken from its original location and reerected here by the American Home-Makers, Inc., an organization which is headed by Mrs. Storrow.


# *Simplicity is the Keynote Where Westinghouse is Sold*



This model showroom from which all other Westinghouse showrooms are copied is at the factory in Mansfield. Visitors are quick to praise its simple early American atmosphere.

# AWAY TO THE PROVING GROUNDS

*Professor Muggin, M. A., S. A., R. I. P.,* **"I am surprised at Prof. Willoughby. No delicate, half measure such as his sledge-hammer test will ever show decisively how strong a household refrigerator cabinet should be. So I have developed a cabinet *proving-grounds*—patterned after the famous automobile proving-grounds—but necessarily much more severe. In this scientific paradise I kick cabinets over cliffs—bury them at sea—shove them in front of landslides and between colliding trains. And at the end I know—not how efficiently, economically, and permanently they maintain essential low temperatures—but how many tons of unleashed force it takes to destroy a refrigerator cabinet, with or without stuffing."**

**Although Professor Muggin has obviously overlooked the really vital qualities of all saleable refrigerators, we feel he has made one valuable contribution to the subject of structural strength. As the steel refrigerator cabinet in itself, is built as sturdily as the average automobile body—and will survive the same rough usage and strain—Prof. Muggin's adoption of the automobile proving-grounds idea has some point.**

**But for the rest we differ—and we beg to be informed. If structural strength greater than that of an automobile body is more essential in a household refrigerator than *efficient low temperature, economically and permanently maintained,* we would like to know it at once.**

**If so, we will change Dry-Zero—now, according to tests by the U. S. Bureau of Standards, the most efficient commercial insulant known—to something approximating battleship sheathing, and build a proving-grounds of our own, with the toughest par in proving-grounds history.**

**DRY-ZERO CORPORATION, 130 North Wells Street, Chicago, Illinois**

# DRY·ZERO

**THE MOST EFFICIENT COMMERCIAL INSULANT KNOWN**

# Standard Sales Presentation Does Not Stifle Individuality

By Richard C. Hay

OBJECTIONS on the part of salesmen to using a standard sales presentation usually arise from the fact that they object to "parroting" their sales talk, they object to having their personalities cramped, and they feel that they are smart to develop a sales talk that will produce the business.

If a salesman were asked to follow a standard sales presentation exactly and in detail, in all of his sales work, these objections would be good. But in an investigation which I recently conducted, I failed to find a single sales organization that asked its salesmen to follow the sales presentation absolutely. In these days, all organizations permit their salesmen to use the standard sales presentation as may be dictated by their judgment, to inject their own personalities into that presentation, asking only that the salesmen master the presentation and satisfy the management that they have mastered the presentation.

Once a salesman has mastered a standard sales presentation, it is almost impossible for him to prevent himself from using the arguments and even the exact wording of the presentation in many parts of his talk to a prospect. And salesmen who have mastered a standard sales presentation admit that the memorizing of the standard sales presentation has given them a track to run on in their selling work, sound methods of expressing their sales points, a means of anticipating the prospect's objections logically. As a result, they admit that the standard sales presentation idea is a good one.

That the plan of permitting the salesman to use the standard sales presentation according to his own ideas, once he has mastered that presentation, is sound, is well illustrated by an experience of the "father" of the standard sales presentation, John H. Patterson, of the National Cash Register Company.

In the early days of that company, salesmen were required to use the standard sales presentation verbatim in their selling work. Finally one of the branch managers, now the president of a large business machine corporation, decided to take a chance with the rules by having his salesmen sell according to their own ideas, provided they had mastered the standard sales presentation. Shortly, the results of this branch office became so noticeable that an investigation was conducted to determine the reasons for the large increase in business. When the facts were brought out, they were sufficiently impressive to induce the management to permit the salesmen to inject their own personalities into the standard sales presentation, once they had mastered that presentation and passed an examination to show their mastery.

Some years ago Thomas J. Watson, president of the International Business Machines Corporation, in a talk before the New York Sales Managers Club, made this statement:

"The National Cash Register Company, when its salesmen were required to handle their selling with an absolutely uniform method of approach, etc., had a result of only 26% from their new men—that is, a turnover of 74% in their salesmen.

### Personality Counts

"When a salesman was allowed to use the standard form, but inject his own personality and his own words—in other words, make it his own approach—the percentage of successful salesmen went up to 78%, or a turnover of only 22%."

As a further indication of the attitude of the National Cash Register Company on the use of the standard sales presentation at the present time, G. E. Irving, of the Sales Educational Division of that company, says:

"The principal excuse offered by salesmen for not wanting to learn it is that it stifles personality. We insist that, on the contrary, it develops the salesman's personality. When we went to school we learned the multiplication tables in their entirety; but now, when we want to know how much six times eight is, we do not have to run through the entire table; we know instantly that it is forty-eight. On the same principle, by knowing this approach and demonstration, the salesman is fortified with a sound and complete presentation. If he is a real salesman his selling sense will tell how much or how little of it he should use in each particular case; also, the order of presentation. We have in the neighborhood of three thousand salesmen, and work from the basis that we want our own message and not the diversified messages of these three thousand salesmen delivered to the prospects for our various devices.

"This is why our management requires every selling representative to know our standard approach and demonstration. As an evidence that the plan pays, 48% of all salesmen trained in our sales school during the past six years are now in our ranks."

On this point an interesting comment is made by C. A. J. Hadley, sales promotion manager of the Marmon Motor Car Company, who says:

"The greatest advantage of a standard sales presentation, as we see it, is that it enables the salesman to have a definite story to tell each prospect that he contacts with. In addition, it enables a new salesman coming into the organization to school himself in the fundamental talking points of the product. That has been our thought in designing our easel stand and everything else our salesmen use."

The standard sales presentation is of greatest value to the salesmen who are new to a specialty selling organization. In organization after organization, the use of a standard presentation by new men has meant a greatly increased effectiveness on the part of these new salesmen, and a greatly reduced turnover. On this point, W. D. McElhinney, vice-president in charge of sales of the Copeland Sales Company, says:

"We deem such sales talks imperative in selling organization. Such talks can be made a very fine presentation of the subject, if used by all salesmen, and the management knows that the product is being presented in the right way. It places the new, inexperienced man on an even footing with the oldest man in the organization, as far as the actual presentation of the product is concerned, and he is not starting under nearly so great a handicap as he would be without a set talk."

Purely extemporaneous selling is often poor and ineffective selling. If a salesman has the main features of his story produced through words that have been shown to be successful in actual use, he is much less likely to be sidetracked by the buyer. For new salesmen, this is invaluable. For older salesmen, it is very helpful and results almost invariably in an increased production on the part of the older salesmen.

One of the best ways to get a sales organization to learn a new demonstration is first to have the key man in the organization learn that demonstration. The Frigidaire Corporation follows this method with great success, and in some of its organizations all salesmen are compelled to learn the demonstration. Sometimes prizes are offered for the best presentation. All newcomers into the Frigidaire organization are required to learn the standard demonstration.

### Three Reasons Why

The standard sales presentation aims to do three things, and if it does those three things successfully, it justifies its existence many times over:

1—To bring to each salesman the best selling points and selling arguments as developed anywhere in the sales organization.

2—To establish a sequence for the sales talk, which will effectively forestall any objections that would normally be raised, which will develop the arguments for a product or service in a logical way, and which will give the salesman some definite ideas for presenting the product, which he can phrase in his own words.

3—It aims to give the salesman a track to run on for his sales talk. No intelligent salesman could possibly object to this kind of help, especially when he realizes that the standard sales presentation is based on the methods found successful by hundreds of other salesmen, and that by using such a standard presentation he will be able to increase his own salary.

There is a tremendous potential in the field of dealer selling, which so far has been practically untouched by manufacturers selling the higher priced specialties. While some organizations make available to their dealers a standard sales presentation which the dealers and dealer salesmen can use in selling the product, hardly any of these organizations require their dealers to use a standard talk. The argument against this definite requirement is well expressed by J. E. Fields, vice-president in charge of sales of the Chrysler Sales Corporation, who says:

"Naturally, we offer the dealer helpful suggestions, but we do not enforce any kind of demonstration or presentation because my experience is that if the presentation suggested were in force and did not work, the dealer would say: 'We did as you told us, and did not get the answer.' Therefore, it is my thought that we should put a man's job up to him and give him such information as will enable him to thoroughly understand what he has to do, and if he does not apply it in the proper way, he is not a good business man, neither is he a very good salesman."

On the other hand, the Sales Promotion Manager of the Hudson Motor Car Company says:

"We believe that every retail salesman should have memorized the standardized sales presentation. Whether he uses it as such or not depends entirely upon his own wishes in the matter. We do believe, however, that his policy insures the salesman knowing the important features of the product and the service, and at least gives him a standard group of ideas that he may present in his own words through the screen of his own personality as he sees fit."

The same arguments that make the standard sales demonstration a good thing for the organization of specialty manufacturers, holds good for the dealers' selling. These arguments have been phrased very well by R. L. Lee, assistant sales manager of the Frigidaire Corporation, as follows:

"We suggest that all dealers learn the Standard Sales Talk. We keep pecking at them from time to time, but it would not be true to say that we require them to learn it. The arguments we use to sell them on the idea might be as follows:

" 'The product for which you ask the prospect to pay a considerable amount of money will appear worth that amount only in the degrees with which you have logically, completely and enthusiastically told the Frigidaire story. The story, therefore, must be worthy of the product.

" 'The standard presentation incorporates the best of the selling experience of thousands. The words employed have been selected after great care. If you, Mr. Dealer, feel capable of formulating your own presentation plan, and if you have time, by all means do so.

" 'The experience of thousands of successful dealers and salesmen, however, proves that the standard presentation will save you time and energy and will enable you to produce sales results more quickly.

" 'Mr. Dealer, the most successful specialty selling organizations in the world are the strongest advocates of the standard presentation, and we sincerely believe the time you spend in memorizing the standard story will pay you big dividends.' "

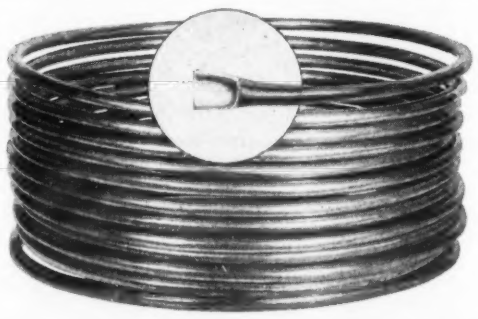
### Adds to Salesman's Earnings

There is great profit to the salesmen of manufacturers and dealers in the use of a standard sales presentation. In one respect alone it is justified, namely, in the effect it has on increasing the earnings of the salesman, even if no other reasons existed to make it a desirable method of selling—such as the assurance that the company's message is being carried to prospects correctly, that every man has an equal opportunity of using arguments of proven value in closing business, etc.

For salesmen and company alike the standard sales talk has proven a good thing, and more and more organizations are making use of this method. The pace of business is always set by the leaders, and when such organizations as General Motors, Frigidaire, Copeland, and others of equal success endorse this method, it is fair to say that it is a selling tool of proven value.


DEHYDRATED
WOLVERINE
SEAMLESS
COPPER
TUBING

Highest quality seamless copper tubing—perfectly dehydrated and solder-sealed—made to A. S. T. M. Specifications (B 68-27T)—ready for quick installation. Send your production requirements for quotations, or wire for rush shipment from stock.



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Export Department—H. M. Robins Company, 120 Madison Avenue, Detroit, U. S. A.
*Cable Address:* Robns, Detroit
Sales offices in all major cities. Stock available at Los Angeles, 224 E. 11th St. Write or wire for name of nearest representative.

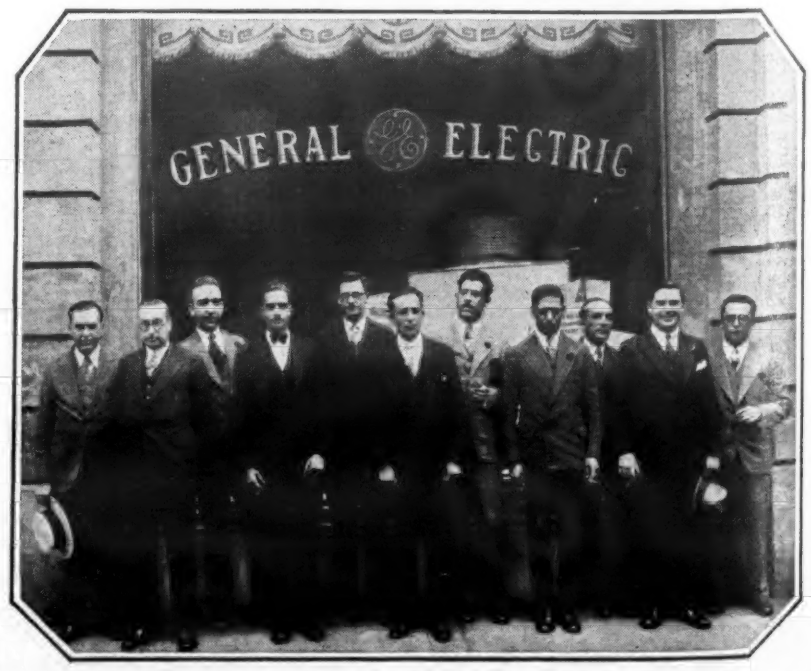


KEROTEST
FORGED BRASS
EVAPORATOR VALVES
» for expansion coils, boilers and brine tanks

Illustrations show two very popular Kerotest Line and Angle Valves. The Line Valve shown is small in size but equally efficient as the much larger double shut-off valve. Ideal for small tube work. Size makes it inexpensive. Does not require double shut-off because of seal cap design.

KEROTEST MANUFACTURING COMPANY
PITTSBURGH, PA.

## Refrigeration in Mexico




A NUMBER of General Electric men were recently graduated from the Refrigeration Institute in Mexico City. The names of the men in the picture from left to right are as follows: P. Gutierrez, E. de la Peña, Enrique Franck, Guillermo Loría, K. K. Boynton, R. Diaz, J. R. Rubio, I. Motta, I. Amor, W. H. Taylor and J. Irazabal R. All were enthusiastic students.

These men will help to pioneer food preservation in Mexico. The outlook for the refrigeration business in Mexico looks promising for 1930. The government is interested in promoting better and safer methods for preserving food and many merchants have already demonstrated the economy and value of electric refrigeration in the business. The Mexican climate demands refrigeration.

# Ushering in the Frigid Era

A LITTLE tongue twisting, which after all probably is just the sort of exercise the average tongue needs, is required in pronouncing the name of the new Frigidaire house organ, the first issue of which has just made its appearance. It is called the Frigid Era.

Edited by C. T. Mutchner, the Frigid Era presents a wide variety of news, interesting not only to Frigidaire men, but to the casual observer. Mr. Mutchner, who is a newspaper man of long experience, has evidently proceeded on the theory that Frigidaire men are human beings, and something that interests the average human being will also appeal to the loyal sons of Frigidaire. As a result the new house organ, while never letting the reader forget that its mission is to talk Frigidaire, provides page after page of material that makes good reading for anyone.

Frigid Era

PUBLISHED BY FRIGIDAIRE CORPORATION DAYTON, OHIO

A MILLION

NEW

PROSPECTS!

"Again Frigidaire is pioneering" . . See Page 2

July 15, 1930

Naturally considerable space is given to the new low priced model that has just been put on the market by the Frigidaire organization, and which was described briefly in the July 16th issue of the NEWS.

The striking center spread of the new publication (Pages 10 and 12) tells in pictures the story of the manifold uses to which Frigidaire equipment is put by Cornell University. Dominating the two pages, is an airplane view of the beautiful Cornell campus, and underneath it are a host of smaller pictures which show Frigidaire at work in the various University laboratories and kitchens. Even the hurried reader who has no time, or thinks that he has no time, to read the details and look at the pictures, cannot escape the impression that Frigidaires are scattered all over the Cornell campus and are doing important work in one of the country's great educational institutions.

Frigidaire salesmen from all parts of the country have their inning in Frigid Era, which devotes two facing pages to short pithily written paragraphs describing their exploits. Among those present are Frank A. Gould, the first man to qualify for the B. T. U. Club in 1930, who has been joined by R. A. Somerville, R. J. Herbert, of Jonesboro, Arkansas, who doubles as a radio announcer; L. P. Desmarais of Somersworth, New Hampshire, who sold his demonstrator before it arrived; W. P. McIntosh, Jr., of Memphis, Tennessee, who outwitted the iceman; and other candidates for the Hall of Fame.

Admiral Byrd, the new Cuban Capitol, and the U.S.S. Nantucket, all turn up in Frigid Era, as satisfied Frigidaire users.

The front cover, as may be seen from the reproduction on this page, is marked by dignified simplicity. Frigid Era gives every promise of a long career of service not only to the Frigidaire Corporation and its employes, but to the entire refrigeration industry.

## LOW PRICED FRIGIDAIRE HAS MANY IMPROVEMENTS

**Dayton, Ohio**—The low-price electric refrigerator market, a field containing millions of homes in the average income class, has been entered by Frigidaire Corporation, with an all-porcelain electric refrigerator priced at $157.50 at the factory, according to announcement by E. G. Biechler, president and general manager.

The new Frigidaire was presented to the sales organization at a series of meetings this month throughout the United States, and was enthusiastically received. Models are now on display in practically every Frigidaire showroom in the country, it was announced.

In addition to the new line, Frigidaire also presented an ice tray which releases one or all cubes with a flip of the fingers, a number of refinements for regular household models, new heavy-duty commercial coils and a new office water cooler at the meetings.

"New production economies, cheaper copper and other raw materials, lower overhead and an anticipated demand from an entirely new class of buyers enabled Frigidaire to bring electric refrigeration within the means of the masses," Mr. Biechler said.

Two low-price Frigidaire models are available. The first, a three cubic foot size, contains four and one-half feet of shelf space, is 48 inches high, 24 wide and 19½ deep. It is finished in porcelain-on-steel inside and out, has two ice trays with a capacity of 24 cubes, or two and one-half pounds of ice at a time. The tray fronts are bright metal and self-sealing and the coil front is porcelain. The model contains other Frigidaire features, such as the cold control with its six speeds for faster freezing, a surplus power compressor for unusual demands, special spring clasp to prevent sliding of shelves and a secure compressor compartment.

The second model, a size larger, contains six square feet of shelf space, is 54 inches high, the same width and depth and ice cube capacity. It is listed at $10 more at the factory. Both models will be finished in glacier gray porcelain-on-steel inside and out, and will be known as the Gray Line.

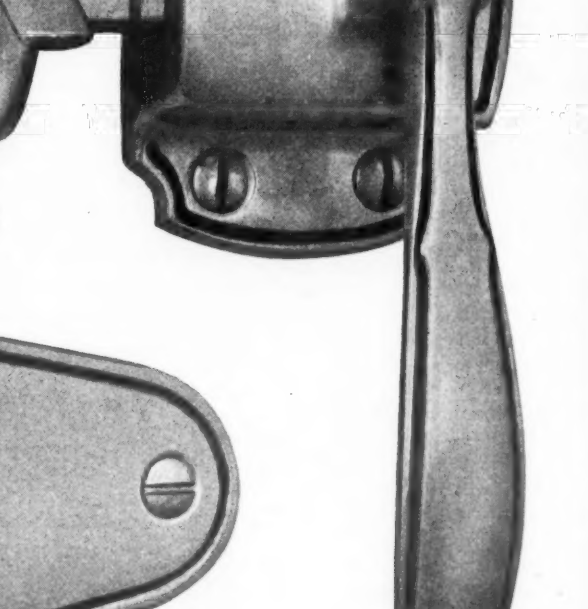
The new ice cube tray, named the Quickube tray, is an exclusive Frigidaire feature, manufactured under a General Motors patent, it is said. It is made of semi-flexible rubber and has a sturdy steel rod that forms handle and frame. It is immune to the adhension of ice and frost and slides readily from the freezing compartment. It has split grids for the self-leveling of water upon filling.

One of the advantages of the new tray is that it makes possible removal of a few cubes at a time, and without taking the tray completely from the refrigerator. If a few cubes are desired, it is merely necessary to pull the tray far enough from the freezing compartment to expose the number wanted and press downward slightly on the handle. The cubes are freed immediately and can be picked out with either fingers or tongs.

Ejection of all cubes from the Quickube tray is a simple, three-second operation. The user merely turns the semi-flexible tray inside out and the cubes, hard-frozen, full-size and dry, fall out. The Quickube tray will be available for the 1,500,000 Frigidaires now in use.

Household line improvements announced include location of the cold control on the outside, a porcelain finished back, a secure compressor compartment and legs or casters for larger models, if desired.

Seven heavy duty coils, which make it possible to furnish commercial refrigeration at a lower cost per pound than ever before, were announced by B. J. Vandoren, commercial sales manager of Frigidaire. These are known as the 20-F, 1242-F, 1266-F, 1278-F, 1842-F, 1854-F, and the 1866-F. In many instances, it was said, two of the new coils will take the place of four which formerly were among the largest in the line.


The Quickube tray is made of semi-flexible rubber. The cubes are easily ejected.

## QUICK ON THE TRIGGER

AS if to prove that it is right up to the minute, Frigid Era warns Frigidaire salesmen against the dangers that lurk in the fad of the moment. Among other sage remarks on Page 18 is this:

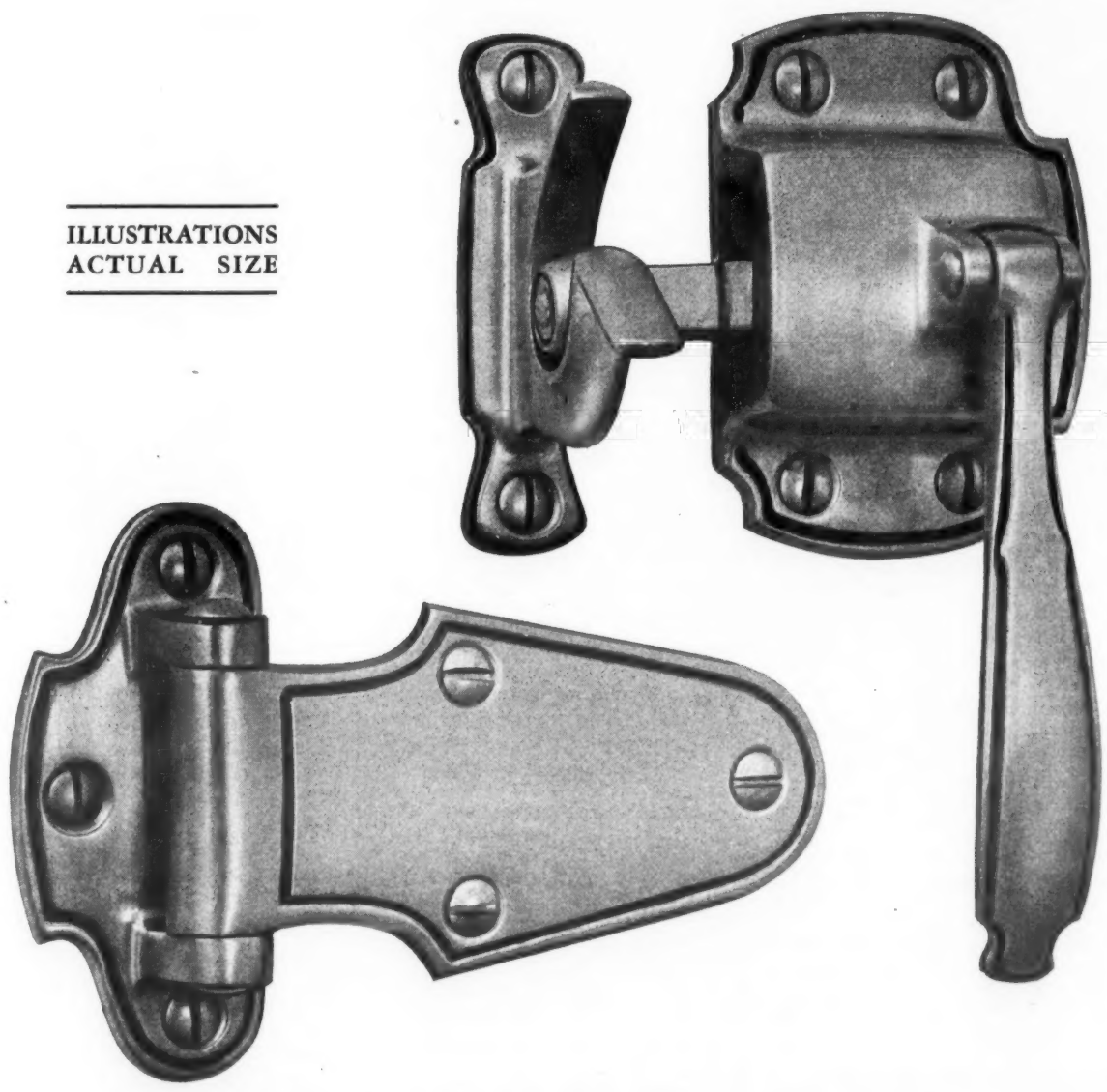
"No Frigidaire salesman ever found a commission dollar on a 'Tom Thumb' golf course."

That will be a great disappointment to a few cold peddlers who have been hoping that the powers that be at Dayton hadn't yet discovered this charming new method of utilizing one's, or one's company's, time.

Ice cubes are easily removed from the new Frigidaire.


# New Locks *and* Hinges

ILLUSTRATIONS ACTUAL SIZE



TWO OF THE MANY HUNDREDS OF PATTERNS TO CHOOSE FROM

LOCKS and HINGES in every size, style and design to correctly trim any Refrigerator or Cooler. All of the popular finishes, including Chromium.

*Special attention given inquiries from rated manufacturers*

GRAND RAPIDS BRASS CO.

GRAND RAPIDS, MICHIGAN

# ELECTRIC REFRIGERATION NEWS

*The Business Newspaper of the Refrigeration Industry*

Published Every Two Weeks by

BUSINESS NEWS PUBLISHING CO.

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VOL. 4. No. 24, Serial No. 100 — July 30, 1930

## Centurial Comment

THIS is the 100th issue of ELECTRIC REFRIGERATION NEWS, which was established by F. M. Cockrell in September, 1926. On the first page of the first issue he stated the editorial aims of the new paper in the following words:

*"To encourage the development of the art.*
*"To promote ethical practises in the business.*
*"To foster friendly relations throughout the industry.*
*"To provide a clearing house for new methods and ideas.*
*"To broadcast the technical, commercial and personal news of the field."*

Now that 100 issues of the NEWS have been published it is fair to seek the judgment of others as to the extent to which these aims have been realized. Inasmuch as Mr. Cockrell was both publisher and editor of the NEWS until the first of this year, thus making whatever success the paper has attained, a peculiarly individual achievement, I felt free to ask a few of the leading men in the electric refrigeration industry to tell Mr. Cockrell and the industry what they think the NEWS has done, is doing and can do in the future. Their replies appear on this page.

Such a wealth of favorable comment imposes additional responsibility on the NEWS in the months and years that are to come. It indicates a standard of excellence that must be maintained. I think that I am safe in saying that Mr. Cockrell, although probably subscribing whole-heartedly to the popular theory that the first hundred issues are the hardest, will in no wise relax his efforts to see that ELECTRIC REFRIGERATION NEWS renders to the industry in the future an even greater measure of service than it has contributed in the first cycle of its existence.

WILLIAM JABINE, EDITOR.

ELECTRIC REFRIGERATION NEWS
National Educational Plan Approved by Electrical Leaders
Electric Refrigeration Council Meets Again at Walkerwyode
Society for Electrical Development to Present Enlarged Program

THE FIRST—SEPTEMBER 11, 1926

—100—

### *"Constructive Force"*

GENERAL ELECTRIC CO.
CLEVELAND, O.

Mr. Wm. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

I sincerely congratulate you and the Electric Refrigeration News, and particularly Mr. Frank Cockrell, on your one hundredth issue.

When we entered the refrigeration field in 1927, Mr. Cockrell's Refrigeration News was one of the most constructive forces in it, and has been gaining momentum ever since. I quickly became acquainted with Mr. Cockrell, learned to respect him for his fine qualities and admire the splendid work he is doing.

Please say to him, and to those associated with him in the enterprise, that he can count on our enthusiastic support as long as the high standard of The News is maintained, and we shall hope, through our appreciation of your contribution to the cause, to merit your continued good will.

Very sincerely yours,

T. K. QUINN.

—100—

### *"Accurate Reporting"*

WELSBACH COMPANY
GLOUCESTER CITY, N. J.

Mr. Wm. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

Congratulations to Mr. Frank M. Cockrell for bringing into being and developing Electric Refrigeration News to its present fruition as represented by the 100th issue.

The Electric Refrigeration News has rendered an invaluable service to the industry through its accurate reporting, its sound and courageous editorial policy, and its signally impartial attitude—so difficult to maintain in a propaganda publication.

Unquestionably, the "News" may properly regard itself as the unofficial journal of the refrigeration industry and may look forward with confidence to a useful and prosperous future.

Congratulations to Mr. Cockrell and all of his associates.

Yours very truly,

WM. R. M. VERY,
SALES PROMOTION MANAGER,
REFRIGERATION DIVISION.

—100—

ELECTRIC REFRIGERATION NEWS
ENGINEERS DISCUSS THE PROPOSED NEW HOME SAFETY CODE
REFRIGERATION THE FEATURE OF N.E.L.A. CLINIC

N. E. L. A.—JUNE, 1927

### *"The Clearing House"*

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
MANSFIELD, OHIO

Mr. Wm. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

The writer wishes to congratulate Mr. Cockrell and his organization on the 100th issue published since the establishment of the Electric Refrigeration News. In my opinion this paper is the clearing house for news in the refrigeration industry and is doing a lot of good in its own way in publishing the kind of information that is helpful to those interested in marketing refrigeration apparatus.

Dealers and distributors seem to read with interest your publication, and their opinions regarding this business are being moulded in the right way, due to the kind of material you are issuing in this publication.

My best wishes go with the Electric Refrigeration News and Mr. Cockrell for his continued prosperity.

Yours very truly,

CARL D. TAYLOR,
MANAGER,
REFRIGERATION DEPARTMENT.

—100—

### *"Of Untold Value"*

UNIVERSAL COOLER CORPORATION
DETROIT, MICHIGAN

Mr. F. M. Cockrell,
Electric Refrigeration News,
Detroit, Michigan.

My dear Mr. Cockrell:

Allow us to congratulate you on the hundredth issue of the "Electric Refrigeration News."

The service that your paper has rendered has been of untold value to the industry. We are sure that you must feel justly proud of your accomplishment.

Wishing you continued prosperity and success, we are,

Yours very truly,

G. M. JOHNSTON,
PRESIDENT.

ELECTRIC REFRIGERATION NEWS
MODEL CODE IS OFFERED TO CHICAGO
SPECIAL COMMITTEE DRAFTS SAFETY ORDINANCE TO MEET DEMANDS OF CITY COUNCIL
Chemists Present Facts on Refrigerators

BATTLE OF CHICAGO—JULY, 1929

—100—

### *"Help Us Expand"*

THE WAYNE HOME EQUIPMENT CO.
FORT WAYNE, IND.

Mr. William Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Sir:

Permit me to congratulate F. M. Cockrell, as well as the Electric Refrigeration News staff, on the splendid progress your publication has made since its establishment in 1926.

I have always found it full of interesting news items and I am sure it is read with interest by everyone. I am taking the liberty to offer a suggestion. First, that an effort be made to increase the circulation among the radio and equipment dealers and jobbers, and secondly, that in order to get this circulation and to more profitably serve your present readers, that you increase your lineage on merchandising methods, sales helps, etc., including articles both by sales experts and also by individual dealers' salesmen. We feel that your paper is extremely valuable to our industry, and we are anxious to see you expand and directly help us expand.

Very truly yours,

GUSTAVE A. BERGHOFF,
PRESIDENT.

### *"Good Job Well Done"*

FRIGIDAIRE CORPORATION
DAYTON, OHIO

Mr. F. M. Cockrell,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Cockrell:

Since the first issue "Electric Refrigeration News" has been uniformly interesting and informative. The publication has kept pace with a fast growing industry and rightfully deserves its position as the accepted organ of the electric refrigeration industry. In bringing the publication to its present status you deserve the approbation of all who like to see a good job well done.

Accept my congratulations upon having reached your one hundredth issue.

Sincerely yours,

E. G. BIECHLER,
PRESIDENT.

—100—

### *"A Real Service"*

WILLIAMS OIL-O-MATIC HEATING CORPORATION
BLOOMINGTON, ILL.

Mr. Wm. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

Congratulations on the 100th issue of Electric Refrigeration News!

It is with pleasure that I tell you what I personally think of this publication and its editorial content. I feel that Electric Refrigeration News benefits the entire industry and affords great opportunity for all its readers to keep in step with refrigeration progress.

With best wishes for your continued success in publishing a paper that is giving a real service in the Electrical Refrigeration Industry, we remain,

Yours very truly,

C. W. WILLIAMS,
PRESIDENT.

ELECTRIC REFRIGERATION NEWS
MAJESTIC PRODUCT ASSERT APPEARANCE IN NATIONAL MARKET
BEHIND THE LINES
"Oil in the Dirty Night"
RENTAL PLAN BACKS FAVORABLE START IN REFRIGERATION FIELD

THE 100TH—JULY 30, 1930

—100—

### *"Pioneering Job"*

KELVINATOR CORPORATION
DETROIT, MICH.

Mr. Wm. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

The Electric Refrigeration News is to be congratulated upon the completion of its 100th issue since its beginning in 1926. Perhaps even more, is its management to be congratulated upon the vision and the venture with which they attacked this pioneering job in connection with a new industry.

We have watched the News grow, as it sought to serve, and did serve, a most useful purpose. The dissemination of news, both trade and technical, has been valuable. The promotion of mutual relationships has been advantageous. Certainly, it has helped to formulate more cordial understanding and good will.

In the future the News has an equal responsibility in these various fields. Merchandising and marketing, advertising and promotion, engineering and improvements, all can be served most helpfully as electric refrigeration goes forward on its march of health and human progress.

Cordially,

G. W. MASON,
PRESIDENT.

—100—

### *"Debt of Gratitude"*

SERVEL, INC.
NEW YORK, N. Y.

Mr. Wm. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

In the establishment of Electric Refrigeration News, F. M. Cockrell and his associates have created a much needed mouthpiece for the Mechanical Refrigeration Industry, and a medium for the exchange of technical information and news pertaining both to the business and personal side of our industry. We all owe a debt of gratitude to Mr. Cockrell for his vision in creating the News, and also for the dignified and fair-minded manner in which he has operated his news columns and conducted his editorial page.

His has been a service well conceived and finely executed.

FRANK E. SMITH,
PRESIDENT.

—100—

ELECTRIC REFRIGERATION NEWS
Engineers Study Latest Refinements in Science of Refrigeration Service
Central Station Executives See Electric Refrigeration As Greatest Load Builder

A. S. R. E. —JUNE, 1928

## *"Factor of Progress"*

NORGE CORPORATION
DETROIT, MICH.

Mr. Wm. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

It is peculiarly true of modern business that we progress as industrial groups rather than as individual businesses. Possibly this is because modern engineering, modern manufacturing and modern marketing are so complex that the interchange of ideas within a group has become the prime factor of progress.

So to the man and to the organization which brings about a consciousness of group inter-dependence in an industry belongs great credit.

Those of us who have watched the development of small unit electric refrigeration through nearly two decades can hardly hesitate in naming Frank M. Cockrell and the Electric Refrigeration News.

In his earlier work with the S. E. D., Frank M. Cockrell became quickly recognized as a modest but earnest and important liaison factor. He interpreted to the many independent leaders of the day the splendid co-operative spirit to which the electrical industry as a whole must attribute a major share of its vast success.

When in 1926 he founded the Electric Refrigeration News, it was the perpetuation of this spirit and the unification of small-unit electric refrigeration that inspired its excellent pages. I wish to add my congratulations and best wishes to those of many others in the industry upon this occasion of the publication of the hundredth issue of the Electric Refrigeration News.

Cordially yours,
HOWARD E. BLOOD,
PRESIDENT.

—100—

## *"Subscribe and Read"*

GRIGSBY-GRUNOW CO.
CHICAGO, ILLINOIS

Mr. W. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

Mr. Young, Vice-President and in charge of sales, and myself have both watched the growth of your publication with interest. Our opinion of it is expressed in a few words and emphatically in a statement that all of our field force of ninety men are required to subscribe and read your publication. They are permitted to put the subscription price on their expense accounts.

Wish you continued success, I am

Sincerely yours,
DUANE WANAMAKER,
VICE-PRESIDENT IN CHARGE OF ADVERTISING.

—100—

## *"Timely News"*

SEEGER REFRIGERATOR CO.
SAINT PAUL, MINN.

Mr. Wm. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

Since its inception, Electric Refrigeration News has performed a material part in the sales department of the Seeger Refrigerator Company.

Its editorial department of timely news of the industry, and its unbiased, clear handling of technical items, make it eagerly and carefully read by all of our department heads.

We are quite sure that the Electric Refrigeration News is important in the progress of the industry.

Very truly yours,
WALTER SEEGER,
VICE-PRESIDENT.

ELECTRIC REFRIGERATION NEWS

FRIGIDAIRE LOSES PATENT SUIT

Automobile Man Heads Copeland

General Recreation Corporation Wins Long and Expensive Legal Battle Involving Basic Features of Domestic Machine

WOLF PATENT DECLARED INVALID PLAINTIFF DROPS OTHER CLAIMS

PATENT TESTIMONY GIVES INTERESTING HISTORICAL RECORD OF REFRIGERATION

PERSONNEL CHANGES ARE ANNOUNCED BY SERVEL SALES, INC.

Eighty-Three-Year-Old Refrigeration Pioneer Testifies at Patent Trial

COMPLETE TESTIMONY—MARCH, 1929

—100—

## *"Very Productive"*

ZEROZONE CORPORATION
CHICAGO, ILL.

Mr. Wm. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

It is only fitting that at this time when you are producing your 100th issue of the "Electric Refrigeration News," we pause a few minutes to congratulate you on the service that has been rendered to the electric refrigeration industry by publication of this newspaper.

We find that it contains a lot of very interesting and very instructive matter from time to time, and has a tendency to keep the industry enthused about the development of this very important business of mechanical refrigeration.

We have found your paper very productive in securing distributor and dealer leads for us. A short time ago, we announced two very popular priced models and ran full pages in the "Electric Refrigeration News," and I am pleased to report that the inquiries that we received as a result were most encouraging, and we have negotiated several new connections.

Let us again repeat, that you are to be congratulated on the publication of this paper, and we have seen it grow and improved since its introduction to the market in 1926, and we look forward to considerable improvement in the future because we have the utmost confidence in your executive staff and believe that they will keep close contact with the refrigeration industry and its development, and keep this even more interesting and more educational than it has in the past.

Yours very truly,
C. E. JERNBERG,
PRESIDENT.

—100—

## *"Freighted With News"*

COPELAND PRODUCTS, INC.
MOUNT CLEMENS, MICH.

Mr. Wm. Jabine, Editor,
Electric Refrigeration News,
Detroit, Michigan.

Dear Mr. Jabine:

It is a real pleasure, upon the occasion of the 100th issue of ELECTRIC REFRIGERATION NEWS, to tell you how highly we regard your publication, and to express a viewpoint which, we feel sure, is shared by the entire industry.

Every issue of your publication is freighted with a volume of news which is intensely interesting and valuable to everyone connected with the electric refrigeration industry, and just as long as the paper continues to be a newspaper in every sense of the word, it will contribute greatly to the good of the industry.

With every good wish for the future,

Sincerely yours,
LOUIS RUTHENBURG,
PRESIDENT AND GENERAL MANAGER.

**100th ISSUE**
**ELECTRIC REFRIGERATION NEWS**
*The business newspaper of the refrigeration industry*
SEPT. 11, 1926 — JUNE 30, 1930


# KELVINATOR

## Pioneer Electric Refrigerator Manufacturer

## CONGRATULATES

## the "NEWS"

### Electric Refrigeration's Pioneer NEWSPAPER

TWO PIONEERS: Kelvinator and Electric Refrigeration News.

This issue of Electric Refrigeration News is the one-hundredth issue to be published. Kelvinator congratulates the "News" on its record of consistent progress. For the "News"—like Kelvinator—was a pioneer in its field.

Kelvinator has just closed the third quarter of its 1930 fiscal year—with profits for this nine-month's period of over $2,000,000.00. Another record of consistent progress!

Kelvinator's beginning was a very modest one. A tiny laboratory. A new idea. Limited finances. But an idea and a will to win!

Today Kelvinator is one of the three largest electric refrigerator manufacturers in the world. Kelvinator distribution is world-wide. Thousands of alert merchants have allied themselves with Kelvinator.

The market for electric refrigerators is still a rich and potent one. Scarcely 10% of the wired homes in the United States are equipped with electric refrigerators.

The Kelvinator franchise offers a greater opportunity for profit-making today than it ever did before. Kelvinator's record of consistent progress over 16 years assures Kelvinator dealers of consistent profits. Information on the complete Kelvinator line will be mailed gladly to interested dealers.

KELVINATOR SALES CORPORATION, DETROIT, MICHIGAN
KELVINATOR OF CANADA, LIMITED, LONDON, ONTARIO
KELVINATOR LIMITED, LONDON, ENGLAND

## INSTRUMENT FOR FINDING PROSPECTS NEXT

**Boston, Mass.**—Lieut. Commander Edwin W. Keith, electrician and night superintendent of the Boston Airport, is now at work perfecting a pocket-size radio finder which will locate the exact position of an airplane in the air so that the pilot may be given directions for landing in a fog-obscured field.

Lieut. Commander Keith was formerly an employee of the Central Maine Power Company of Augusta, Maine, a public utility company which merchandises the General Electric refrigerator.

By accident Lieut. Commander Keith discovered that a device he had contrived to locate short circuits and faulty insulation in high tension wires was also a direction finder.

With the help of the Massachusetts Institute of Technology laboratories, he experimented until his device could locate automobiles, boats at sea (as far as 1,000 miles), and finally airplanes.

His close friends in the sales department of the Central Maine Company are hoping that he will be able to show them how to locate good refrigerator prospects.

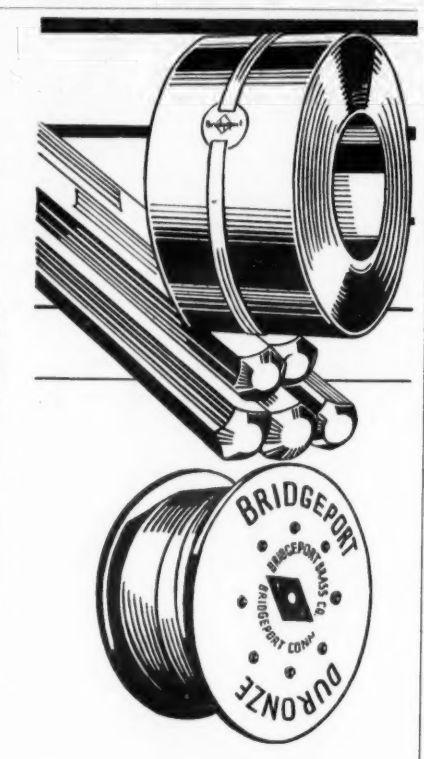

"Bridgeport" BRASS CO. TRADE MARK

**Bring Your Costs Down**

**Manufacturers using non-ferrous alloys should know about the ability of Bridgeport engineers in designing and making fabricated parts stronger and tougher and lighter than cast pieces.**

**Beginning with brass mill products such as sheet, rod, wire and seamless tubing in copper, bronze and brass, we not only serve manufacturers who require raw materials but make manufactured articles for those who buy such items finished and stamped with their name.**

***Brass Mill Products and Fabricated Articles to Order***



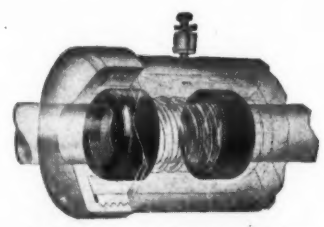

**Bridgeport Brass Company**

Bridgeport, Connecticut

New York Philadelphia Chicago Cleveland Detroit Boston Louisville Buffalo Newark Providence Dayton Pittsburgh Syracuse



WITH THE SHAFT ROTATES WITH THE SHAFT ROTATES WITH THE SHAFT ROTATES



*Style No. 2 Cooke Seal Ring*

**How to Get Rid of Hot Weather Complaints**

**Machines with lowered efficiency, due to leaking refrigerant, can be made good as new—for good—with a Cooke Seal Ring.**

**It is leak proof. The most volatile refrigerant cannot get by its smooth-running ground joint. Not only does it do away with leaking refrigerant but, on other machines not Cooke-equipped, it enables dealers to repair, on the job, with a minimum of time and labor, worn-out packing or other types of seals.**

**Cooke Seal Rings don't leak, squeak or overload the motor. First cost is their only cost and they last indefinitely. Use the coupon now.**

**COOKE Seal Ring**

20 N. Green St. Chicago, Illinois Dept. C

Cooke Seal Ring,
20 N. Green St., Chicago, Dept. C

Please tell me more about Cooke Seal Rings.

Name.....

Address.....

City..... State.....


## *Mid-Summer Comfort*

EFFICIENCY of the electric room cooler is demonstrated in the record of the installation in the Rheaume restaurant, Detroit. Located in the basement of a downtown Detroit office building, the restaurant had difficulty in keeping up summer trade. Heat and humidity both were slightly too high for comfort in this restaurant, and Mr. Rheaume decided that some method of refrigeration was necessary.

Result of his study of the situation was the installation of eight Frigidaire room coolers in his restaurant. In one month the comfort of his restaurant in mid-summer weather was so well known that business had increased 25 per cent.

Approximately ten degrees drop in temperature was effected by the room coolers, according to the proprietor. Humidity in the room, collecting on the coils in the form of frost, was removed at the rate of about three quarts of moisture every ten minutes. An unexpected advantage came with the removal of cooking odors from the air in the restaurant, these odors being collected with the moisture.

"In comparison of price quotations," Mr. Rheaume says, "the initial cost of this type of room-cooling equipment is about one-half as much, and the operating cost less than one-third of other systems. Also, due to the fact that these room coolers are absolutely automatic and care-free, we have been saved the cost of maintaining a licensed engineer, which is necessary in all heavy-duty types of cooling systems."

## WESTINGHOUSE SALES GOOD IN OHIO

**Dayton, Ohio**—Announcement that Westinghouse electric refrigerator sales in the Dayton territory are showing a substantial increase week by week, was made by J. R. Hoskinson, general manager of Electric Refrigeration Company, at a picnic of the joint sales force of the Dayton and Cincinnati Westinghouse territories. The affair was held July 11 in appreciation of the excellent June sales records made by both organizations.

Guests at the picnic included J. W. Johnson, Arthur Vassar, L. K. Baxter and R. L. Sanner of the Westinghouse factory. T. M. Williams and Matt Williams, of Tafel-Williams, Louisville, Ky., also enjoyed the festivities. An address of welcome was made by K. B. Allen, president of the Electric Refrigeration Company, Dayton Westinghouse distributors.

## WINNING SALESMAN TO SEE WORLD'S SERIES FREE

**Beaumont, Tex.**—Some persistent General Electric refrigerator salesman in the employ of the Eastern Texas Electric Co. and the Gulf States Utilities Co. will get to see the 1930 World's Series free next October.

Every salesman in the organization has been bogied for this World's Series Refrigerator Sales contest, and the details of the plan are worked out so that each man starts equally with the rest and finds the same proportionate number of hurdles in his path.

The winner of the contest will be sent to the 1930 World Series, all expenses paid.

## O. C. EMRICK DROWNED NEAR CINCINNATI

**Cincinnati, Ohio**—Orla C. Emrick, service manager for the Kelvinator division of the Williamson Heater Co. and formerly connected with the Kelvinator factory, was drowned Sunday, July 20, in the Big Miami river. He had been camping on the banks of this river near Cincinnati.

After diving from a spring board into water 12 feet deep, Mr. Emrick was seized with cramps and was unable to keep himself afloat. Attempts at artificial resuscitation were unavailing.

He had been married but a short time. Besides the widow he leaves a father, mother, and five brothers.

## DETROIT COMPANY ERECTS NEW PLANT

**Detroit, Mich.**—Within a period of 12 days after fire had destroyed the plant of Mitchell & Smith, Inc., manufacturers of cork insulation material, a new plant had been erected and installation of machinery, preparatory to resumption of manufacture, was under way. This construction speed record was accomplished by the Austin Co., engineers and builders.

Although the new plant is no larger than the old and the same equipment is being used, rearrangement in the production layout is enabling the company to double its daily output. The company's cork insulation is used for refrigerators and for furnishing cork insulation for battleships underneath decks and around refrigeratnig and food conditioning rooms. At the time of the fire the company was engaged in the production of large contracts for the United States Navy, the Kelvinator Company and other consumers and deliveries on these orders were delayed only for a relatively brief period. Mitchell & Smith, Inc., was organized about nine years ago. In addition to insulating material, it manufactures gaskets, bottle corks and miscellaneous products.

## *Byrd and Kelvinator*

BYRD and Kelvinator were the principal attractions recently at the Tennessee Theatre in Knoxville. The picture "With Byrd at the South Pole" is beyond doubt very suggestive of refrigeration and it put the many patrons in the right frame of mind to inspect the Kelvinators on display. This opportunity to present the message of refrigeration at the ideal time was seized by the King Mantel Furniture Company, Kelvinator distributors for that territory.

Of special interest is the number of Kelvinators on display. The richly decorated lobby was transformed into a veritable showroom and at least a dozen refrigerators can be counted in the photograph. Just how the King Mantel negotiated the deal is not known, but appearances indicate that the Knoxville men were on the job when it came to arrangement for a display of a large number of Kelvinators. Mrs. Edward Henkel was the holder of the lucky ticket and as a result is enjoying the advantages of electric refrigeration.

# ELECTRIC REFRIGERATORS IN DUBUQUE'S BEST HOMES

**Dubuque, Iowa**—This city has a population of about 42,000 according to the latest census figures. It has about 9,500 wired homes and the best available estimates put the number of electric refrigerators in use at approximately 1,000. On the day these figures were compiled, there also were fifteen boys engaged in that arboreal pastime known as tree sitting, but it is doubtful if that fact has any direct bearing on the electric refrigeration situation, although the boys were being supplied with cold drinks and ice cream by some of the Dubuque merchants.

Frigidaire, which is sold by the Interstate Power Company which operates in Dubuque and a few smaller towns in the vicinity, is the leader. There are about 600 Frigidaires on the power company's lines, of which about 115 have been sold this year. There are a number of interesting commercial installations, one of them being in the Dubuque Baking Company's plant, where a battery of five Frigidaire compressors are used to keep the dough properly cooled. It is one of the biggest installations of its kind in this part of the country.

The Frigidaire sales are in charge of H. A. Beatty, District Merchandise manager. He keeps about four men on sales work, and has an efficient, smooth-working organization. In the outlying districts he has been doing a little experimenting in making sales by first placing a refrigerator in the home for a trial period. Thus far it has proved successful, and in only one case has a refrigerator been taken out after it once was installed on demonstration.

Kelvinator was the first refrigerator sold in Dubuque, and Mullen Brothers & Co. have been handling Kelvinator since the start. They now have more than 100 refrigerators out and get their fair share of the business.

The General Electric situation in Dubuque has become somewhat complicated by some unexpected changes in dealers. The present incumbents are the Appel-Higley Electric Company, which has a well established electrical business, handling radios, lighting fixtures and other items. Previous holders of G. E. representation have been selling General Electric refrigerators at rather startlingly low prices, which has its effect upon the entire refrigeration market in Dubuque. There are probably about 200 General Electric refrigerators now in use here.

Copeland is represented by the Renier Music Company and Norge is sold by the Hartman Furniture Company and the Mulligan Battery and Electric Station.

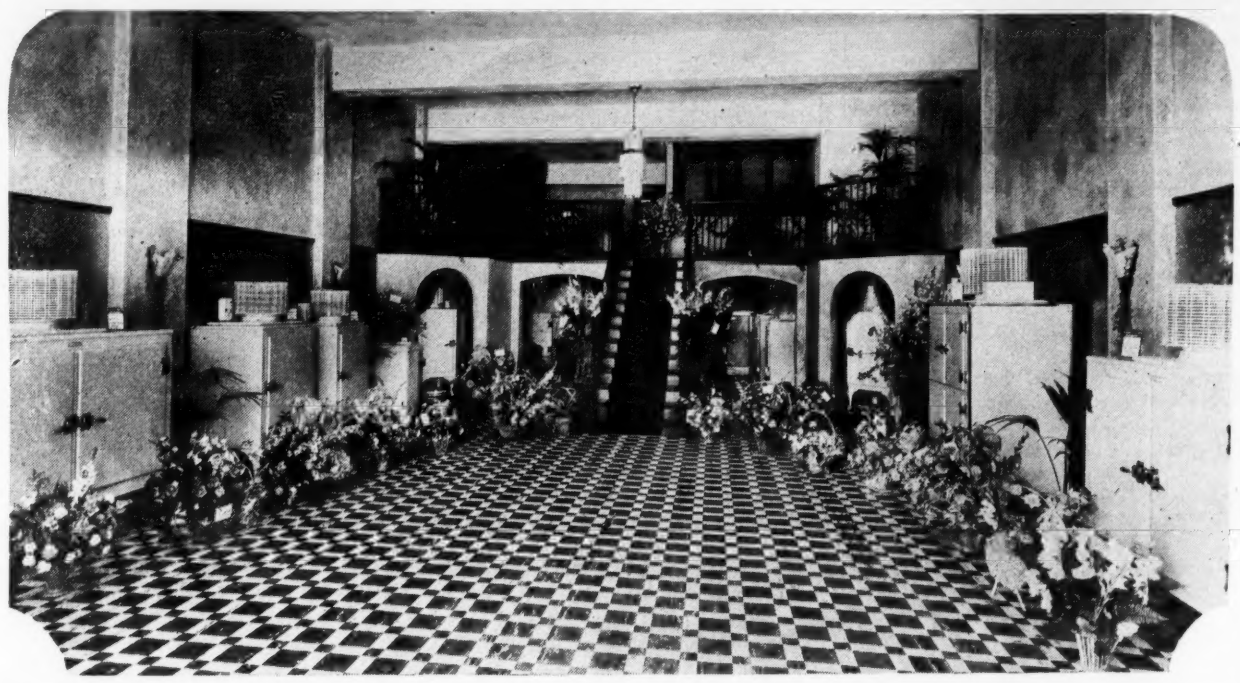
Just who will sell the new Majestic line in Dubuque still seems a matter of doubt. The Roehl-Phillips Furniture Co. which has the Majestic Radio also represents Zerozone, which may complicate the situation.

## GRIMM LEAVES GIBSON

HOWARD L. Grimm, who has been connected with the ice and refrigeration business for many years, and has recently been president of the Ice Service Refrigerators, Inc., of Greenville, Mich., has announced his retirement from that position He also has withdrawn from his association with the Gibson interests and the American Refrigerator Corporation.

For a limited period Mr. Grimm's services are available to the ice and refrigerator industries in an advisory or productive engineering and merchandising capacity on a contract basis.

# *Wichita's Junior League Officiates at Opening*



**Wichita, Kans.**—Three years ago the Johnson Brothers Auto Supply Co., already doing a prosperous business, decided to take a side line "just for the fun of it." For this side line they chose to sell General Electric refrigerators.

Today the infant side line has grown to such large proportions that it does more business than the parent concern, and has been organized as a separate company.

Last month the newly-formed Johnson Electric Co. opened for business in a three-story building, amid the strains of a dance orchestra and the gay chatter of Wichita's Junior league. Girls from the latter organization were hostesses for the party, which included dancing in the store's clubroom, as part of the program.

Display rooms occupy the entire first floor of the building. The clubroom and institute which is used by Wichita women's clubs for bridge parties, meetings, and the like, is on the second floor. There also are the offices; while the third floor space is used as a storeroom.

The photograph which is reproduced above was taken on the opening day, and although it does not show the Junior League girls on the job, it does show the picture which greeted them when they arrived. The flowers were even more beautiful than the refrigerators.

## FOURTEEN JERSEY SALESMEN FINISH IN THE MONEY

**Newark, N. J.**—Star refrigeration salesmen of the Public Service Corporation of New Jersey like to see the end of each quarterly period roll around. When the curtain for the second quarter was dropped, records were checked and some fourteen salesmen were found to have crashed into the money.

Leading the list of stars was Albert J. Danielson, North Hudson, who annexed the sum of seventy-five dollars for his outstanding sales efforts. Other winners were : Morris E. Schwartz, Jersey City, $50; Bernard B. Gottleib, Bergen Division, $30; Phillip S. Hurlburt, Plainfield, $25; William B. Gundrum, Elizabeth, $20; Russell L. Wann, Hackensack, $15; William Scott, Newark, $10.

In addition, the following refrigeration representatives also qualified for prizes by obtaining the minimum of $5,000 in sales: Arthur F. Feuling, Newark; William H. Doherty, Paterson; Edward Hart, Rutherford; Abe D. Londa, Elizabeth; Christopher Hayes, North Hudson; Louis J. Buyatt, Bayonne; John Hughes, Elizabeth.

Prizes are awarded every quarter to the refrigeration representatives obtaining the largest amount of dollar sales during the quarter.

## DOUGLAS BECOMES GIBSON FOREMAN

**Greenville, Mich.**—A. E. Douglas is enemal shop foreman of the Gibson Refrigerator Co.

## COPELAND BRANCH NAMES PEORIA REPRESENTATIVE

**Peoria, Ill.**—Copeland Refrigeration Company of Chicago announces the appointment of the Peoria Home Appliance Company, 308 North Jefferson Avenue, as its distributor in central Illinois.

H. M. Mathis, proprietor, was formerly connected with the Joliet Title & Guarantee Company, of Joliet, Illinois. Guarantee Company.

A sales organization is being developed to handle the sale of both commercial and household equipment, and an intensive campaign will begin immediately.


**Refrigerators Tested** • Both Ice and Mechanical Refrigerators Tested for Performance in our Refrigerator Laboratory. This service is unique for the Manufacturer or Distributor.

*We invite your inquiries.*

**George B. Bright Co.**
*Regrigerating Engineers and Architects*
2615 12th Street, Detroit

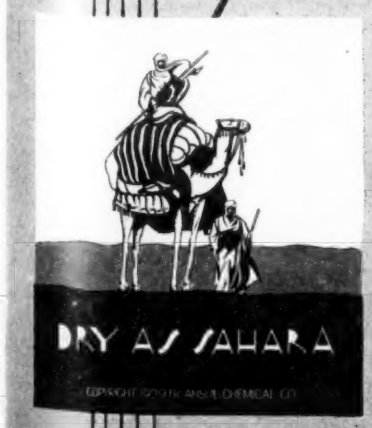
FLINTLOCK CONDENSERS
*Full Capacity*

*With Every Unit*

FIN AND TUBE SAME SOLID PIECE OF MATERIAL

FLINTLOCK CORPORATION
4461 W. Jefferson Ave.
DETROIT, MICH.

DRY DRIER DRIEST
SULPHUR DIOXIDE
*for Direct Charging*



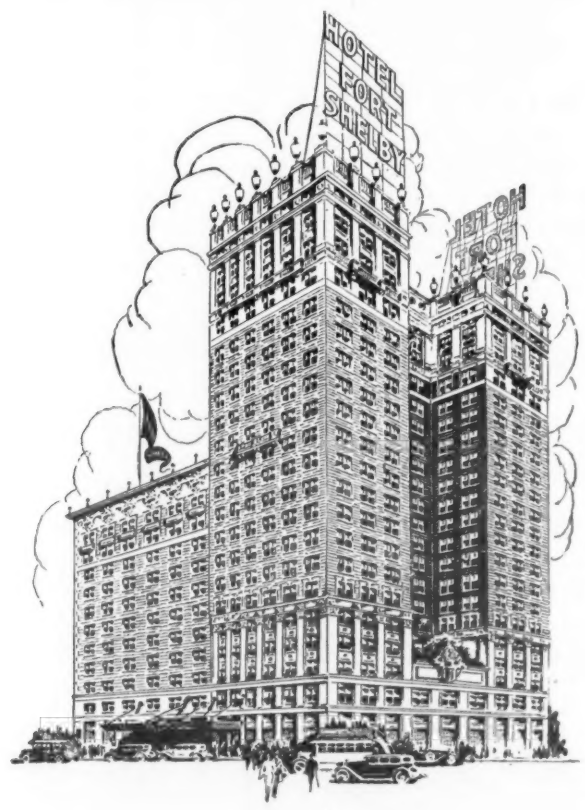

"Ansul" Sulphur Dioxide is scientifically dried through a four stage dehydrating system, each stage being composed of three units in series. Absolute manufacturing control is maintained throughout.

*Also ton drums and tank cars*

*Every Cylinder Analyzed Pure Bone Dry*

ANSUL CHEMICAL CO.
MARINETTE, WISCONSIN

So *you're coming to* DETROIT?




Wire and we'll make ticket reservation for you to theaters, concerts and sporting events—we'll have them ready when you arrive. Hotel Fort Shelby offers the dual advantage of a hushed, peaceful environment . . . and immediate proximity to the financial, theatrical and shopping centers of downtown Detroit. 900 attractive rooms—Servidor equipped. $3.00 per day and up. Write for direct motor route. Look for large green sign atop 22nd floor.

J. E. FRAWLEY, *Managing Director*

HOTEL FORT SHELBY

LA FAYETTE *at* FIRST, DETROIT

## KELVINATOR MEN IN SOUTH MEET IN ATLANTA

**Atlanta, Ga.**—A midsummer meeting of the Southern distributors of the Kelvinator Corporation was held at the Biltmore Hotel here, Friday, July 20.

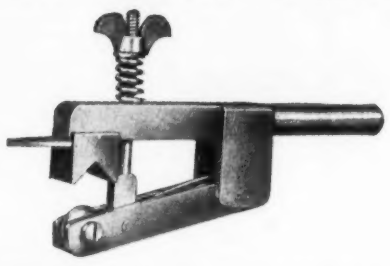
Kelvinator factory representatives attending were J. S. Sayre, sales manager; S. D. Camper, Midwestern district manager; T. P. Hallock, Southeastern district manager, and E. L. Triffitt, of Brooke, Smith & French, Inc., advertising counsel.

Distributors attending the meeting were: L. L. Hirsch, Electrical Supply Company, New Orleans; I. W. Lampton and M. D. Patterson, Kelvinator Mobile Company, Mobile, Ala.; J. G. Mathews, Mathews Refrigerator Company, Montgomery, Ala.; R. D. McDavid, Clark & Jones Co., Birmingham, Ala.; R. C. Daubs, Kelvinator Georgia Company, Atlanta; R. E. Kimmell, Kelvinator Kimmell, Inc., Jacksonville, Fla.; H. M. Daugherty, Daugherty Supply Company, Chattanooga, Tenn., and Si Humphries, King Metal & Furniture Co., Knoxville, Tenn.

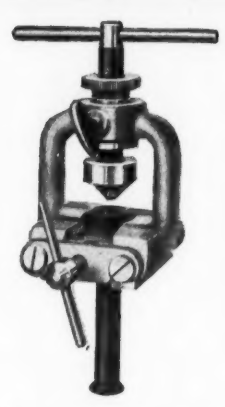

**Precision**

**TUBE CUTTERS**
**FLARING TOOLS**

***New - Better - Faster***



This Copper Tube Cutter, with automatic pressure feed spring, is in a class by itself. Tubing is cut quickly and cleanly, without flattening or threading tube.



A flaring tool that spins out the tube to a soft flare and then burnishes it to a polished surface and a perfect fit with male seat. This is accomplished by three hardened rollers. Four hardened jaws in two pieces are a part of each tool.

MANUFACTURED BY

**C. M. SMILLIE & CO.**
520 E. LARNED STREET, DETROIT



**CALCO**
**Sulfur Dioxide**

*"Buy the best, by every test"*

**Cylinders - Drums - Tank Cars**

**THE**
**CALCO CHEMICAL CO., INC.**
Bound Brook, N. J.

New York Boston Philadelphia



**MILLIONS OF PIECES**

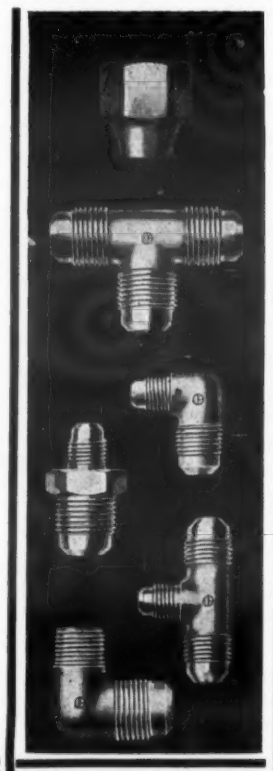
THE millions of fittings used in Automatic Refrigeration are tiny things and yet upon their perfection depends the success of the entire installation.

In order to make Commonwealth Brass Seepage Proof Fittings of absolute dependability an enormous investment in plant equipment is required.

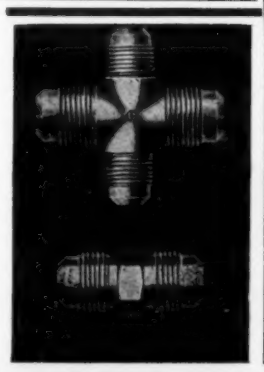
Turning out fittings by the million pieces, each one perfectly fabricated, engages the energies of several hundred employees, in addition to the most modern and complete equipment in brass working. These facilities include:

*Engineering and Design Supervision*
*Die, Tool and Pattern Departments*
*Hot Forging Division*
*Scores of High Speed Automatics*
*Complete Foundry Facilities*
*Trained Inspection Service*
*Immense Stocks of Finished Pieces*

Back of all these is 18 years' production experience, with intimate knowledge of the industry's requirements.



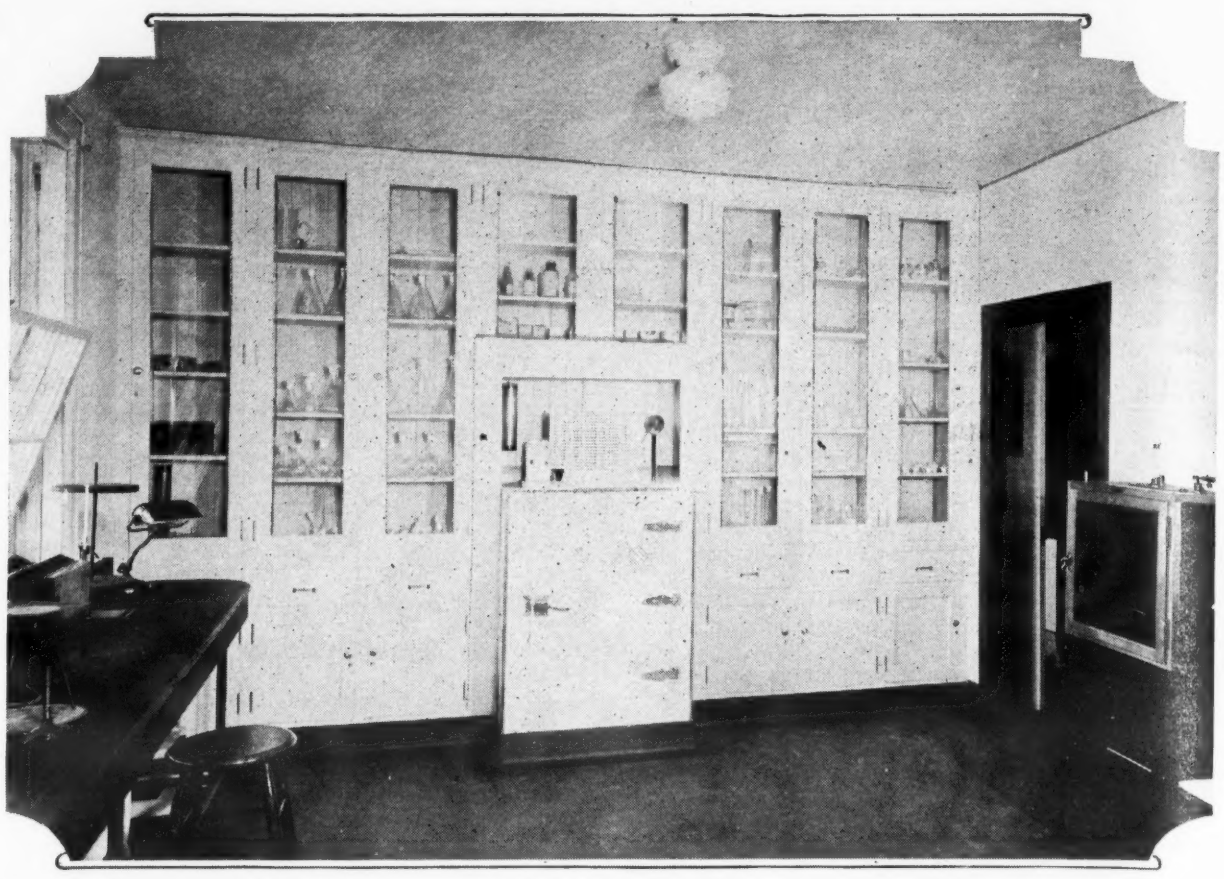
SEND FOR
CATALOG No. 36



**COMMONWEALTH**
**BRASS**
**CORPORATION**
Commonwealth at G.T.R.R.
**Detroit**

**BUILT**
**RIGHT**
**TO STAY**
**TIGHT**


## *In a Hospital Laboratory*



**Canton, Ohio**—Keeping the little bugs cold but not quite frozen, is the business of this General Electric refrigerator recently installed by the Willis Company in the bacteriological room of the laboratory in the newly opened $500,000 wing of the Mercy hospital. Here all media for growing bacteria are kept, vaccines and all other solutions that are required to be kept cold. In the freezing compartment, complements for serums and for Wasserman tests have their place.

The recess in the cabinet side of the laboratory wall was planned for this General Electric by W. H. Henderson, local sales manager. Five other General Electrics were installed in the hospital, four for the floor diet kitchens and one for the abby wing in which nothing but baby foods and milk for babies are kept.

Frigidaire installations in the hospital consist of a 798 cubic foot cooler in the basement, containing four compartments, each compartment having a six-foot door. One compartment is for meats, one for vegetables, one for ice and one for dairy products. Frigidaire also installed the water cooling system and miscellaneous food kitchen refrigerator.

## SUTCLIFFE CO. WILL SELL NORGE TO KENTUCKIANS

**Louisville, Ky.**—The Sutcliffe Company, large sporting goods house, has been appointed distributor for Norge refrigerators in Kentucky and southern Indiana. W. Catlin is sales manager and is enthusiastic in regard to the prospects for selling refrigeration in this territory.

About forty dealers have been selected to sell Norge refrigerators throughout the state, and at present two in Louisville, the Radio Corporation of Kentucky, Second street, and the Bensinger Outfitting Company, Market street. There are seven salesmen working in the city.

## NEW PORTLAND APARTMENT HAS FRIGIDAIRES

**Portland, Me.**—Thirty-one Model 48-37 Frigidaire apartment house cabinets were installed in the newly completed Northgate Apartments by the Home Electric Light & Power Equipment Company, according to William B. Ward, manager.

Each unit operates from a central plant in the basement where a C compressor, an N compressor and 112 TF coils have been installed. The apartment, regarded as one of the most modern in the city, was built by Clough & Maxim Company, real estate dealer. This company has adopted Frigidaire as standard equipment for all of its buildings. Previous installations include the Pilgrim, 41 units; Miles Standish, 32 units, and Arden, 18 units.

Other recent commercial installations by the Home Company include: Compressors and 12 F coils in each of three lunch rooms owned by the Liberty Dining Car Corporation; and installations in four local meat markets.

## RIDDICK IS HONORED

**Jackson, Miss.**—A. G. Riddick, General Electric's livewire distributor for the state of Mississippi and the northern half of Louisiana, was recently accorded new honors by the Mississippi Electric League. At its annual meeting recently, Mr. Riddick was elected president. He has been very active in the League affairs and for several years has been secretary-treasurer of the organization.

A. G. Riddick

## SIX FOR SPIKE

**Gloucester, Mass.**—Selling six General Electric refrigerators for one home is the record of Edward B. Spike, sales manager of the Gloucester Electric Company.

Mr. Spike decided that the new home of Mrs. Margaret Brady Farrell, on Atlantic Road, Eastern Point, Gloucester, should be General Electric equipped. So he pushed the doorbell himself.

Here is what Mr. Spike sold to Mrs. Farrell:

1 G-40 for the servants' quarters.
1 S-100 for the butler's pantry.
1 PS4-17 for Mrs. Farrell's daughter's apartment.
1 S-62 for the pastry cook's pantry.
1 CS-600 for the main kitchen.
1 Ice maker for the main kitchen.

This was a nice day's work, but nothing so very unusual for Mr. Spike, who has placed a great number of General Electric refrigerators in this locality, having sold 110 per cent of his quota to date.

## DISTRIBUTOR OPENS MERIDIAN BRANCH

**Columbus, Miss.**—Mississippi Refrigeration Company, distributor for Servel, has just announced the opening of a new branch at Meridian, Miss. J. C. Benedict of Jacksonville, Fla., will be in charge of the Meridian office.

## BOSTON FRIGIDAIRE MEN LIKE LOW PRICED MODEL

**Boston, Mass.**—J. S. Pfeil, New England sales manager for Frigidaire, presented the new model refrigerator to 350 salesmen gathered at the Copley-Plaza, Boston, recently. The new unit is priced at $157.50 and Mr. Pfeil described its possibilities to the enthusiastic gathering.

The meeting was also used as a means for introducing the new rubber tray which releases ice cubes with a simple movement of the fingers. New commercial coils were also given their first New England showing.

Other speakers present at the occasion were: H. C. Jamerson, distribution manager; J. K. Knighton, regional manager; E. H. Gilbert, R. H. Huston, W. E. Brown, of the Frigidaire Corporation; E. H. Richardson, W. L. Cummings and C. H. Dirksmeyer of the Boston organization.

Jordon Marsh Co., the Edison Electric Illuminating Co., the Cambridge Electric Light Co., Malden Electric Co., Quincy Electric Light & Power Co., Suburban Gas & Electric Co., the Weymouth Electric Light & Power Co., Reading Municipal Light Department and the Frigidaire Corp., 743 Boylston Street, Boston, have arranged for special showings of the new model in Greater Boston and surrounding towns.

## PALMER SUCCEEDS ASHMORE IN NEW ENGLAND

**Bridgeport, Conn.**—G. Edward Palmer has been named sales manager by the Atlantic Utilities Company, Electrolux distributors for Connecticut, Rhode Island, and the western half of Massachusetts. He succeeds H. E. Ashmore, resigned. Mr. Palmer has been connected with the sales department of Atlantic Utilities for several years, during which period he has been on the road throughout the entire territory.


**E.T.L. Service** for Domestic and Commercial Electric Refrigeration

Testing and experimental laboratory service for Manufacturer, Distributor, Central Station—
Test data exclusive property of client.

ELECTRICAL TESTING LABORATORIES
80th Street and East End Avenue, NEW YORK CITY, N. Y.



*precision built*

*Specializing in*
**Refrigeration Compressor**
**Eccentric**
*and*
**Crank Shafts**

Made to your specifications. Send us your blue prints—we'll send you our prices.

**Modern Machine Works, Inc.**
195 Milwaukee St., Dept. C, MILWAUKEE, WIS.

# *Streamline Fittings Developed for Copper Tubing*

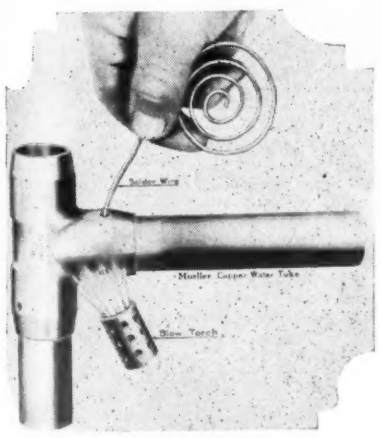
Close quarters no handicap.

**Port Huron, Mich.**—The Mueller Brass Co. has developed the new Streamline refrigerator fittings and all sizes and styles of fittings are now in stock for prompt shipment.

The new Mueller Streamline fittings have aroused enthusiasm among plumbing and heating contractors, chiefly because they will bring copper piping systems within the reach of all users of piping for plumbing, heating and many industrial purposes. Streamline fittings eliminate all pipe threads and flares; the joints are made by means of the blow torch, solder and utilization of the law of capillary attraction. Consequently, hard drawn, thin-walled copper tubing can be used.

The extremely thin film of solder fills in between the tube and fitting. Photomicrographs show that this solder actually amalgamates with both tube and fitting to form practically a solid joint. Several hundred pull tests and bursting tests have been made; invariably the failure is in the extra-heavy, hard-drawn copper tube and not in the joint.

The method of making up the joint is indicated in the small photograph below. After the tube end has been cleaned and solder paste applied, it is inserted in the fitting. The fitting is heated uniformly with a blow torch and wire solder is fed through a convenient-




Solder easily applied.

ly drilled hole into the solder channel from which it is distributed by capillary attraction until it appears at the tapered end of the fitting.

Capillary attraction is the ability of a fluid to rise above its normal level when it is restricted between close fitting surfaces or in a small tube. When making a joint between a fitting and copper water tube, the solder flows up, down and laterally with equal facility. There is practically no limit to the height to which solder will rise by capillary attraction. Laboratory experiments have conclusively shown that it will rise at least 2½ feet, which is far in excess of any practical requirement.

In addition to the regular Streamline elbows, tees, couplings, etc., special fittings are available with one outlet threaded so that a job using this material can be tied into an existing iron pipe installation.

Mueller Streamline fittings are protected by Patent No. 1,770,852, issued on July 15, 1930, to the Mueller Brass Company, of Port Huron, Michigan.

# METAL SPRAYED ON WOOD BY NEW GERMAN PROCESS

SUCCESSFUL experiments have been conducted by Dr. M. U. Schoop in Zurich in the application of metals on wood. Metallo wood, as it is known, has many qualities which make it adaptable in the construction of refrigerators.

The high pressure with which the metal spray leaves the spout (or nozzle) imparts to the metal particles an extraordinary velocity (about 800 meters per second), so that they penetrate into all depressions and pores of the wood, where they are firmly anchored. The adherence of the covering is so perfect that the metal covering under no circumstances can be severed.

The metalized product consists inside of totally unchanged wood, while on the outside surface the pores are completely filled with metal.

Experiments have shown that it is better to melt the metal indirectly, i. e., not directly upon the metal by the acetylene torch, the temperature of which is over 2000° and the overheating cannot be avoided, while with the indirect method the temperature can be adapted to the metal.

Wood plates can be covered with metal on one side or both sides; that depends on the use to which it is to be put, and this also applies to the kind of metal, copper, aluminum, brass, etc.

Metallo wood can be cut, bent, nailed and sawed.

Metallo wood reduces the danger from fire, and is more durable and weather-resisting than wood without protective covering. It is impenetrable by insects (termites), and by virtue of its smooth metal surface especially adapted to the construction of cabinets, refrigerators and for interior architecture.

With the aid of tin or celluloid stencils, metallic decorations can be applied. In this process the stencil is laid on the wood and sand is blown on to make a groove or depression of about ½ millimeter deep. Without removing the stencil, metal is blown on till the grooves are filled; after removing the stencil it is ground and polished.

# PROTEST AGAINST CITY SELLING REFRIGERATORS

**Dothan, Ala.**—Since the city of Dothan has entered the electrical supply business which includes a line of refrigerators, local business and professional men are raising a protest. Forty-two business dealers and professional men recently signed a petition protesting against the city competing with electrical dealers and other concerns.

The city has been selling stoves and other electrical apparatus for several months. It was just recently, however, that a line of electrical refrigerators was added.

City officials will probably consider the matter at the next meeting.

# REFRIGERATOR WOULD BE REALLY USEFUL TROPHY

FIRST prize in your next club golf tournament: an electric refrigerator! No less an individual than Helen Wills Moody, woman's singles tennis champion of the world, reports that in Europe "something for the home" is replacing the time-tarnished silver cup as reward for winning amateur tournaments; and no less an institution than the Detroit *Free Press* recommends the practice to the United States.

In a recent editorial the *Free Press* says:

"While there are few who attain the eminence of a Wills, a Tilden or a Jones and who, consequently, find their collection of silver becoming a trifle cumbersome, there must be hundreds of local champions all over the world who have won cups ranging from approximately thimble-size to something large enough to hold a bouquet of flowers. In modest homes the task of keeping this family silver untarnished must present something of a problem, at least until the novelty of possession has worn off and father is no longer insulted if he finds the tiniest speck on one of his precious cups.

"We have no statistics to offer on the subject, but we dare say that sentiment in favor of 'something for the home' has been growing in this country, so that there will be an element of variety in the prizes fought for with tennis rackets and golf sticks."

Enterprising salesmen should take their cue from this and make country club tournament chairmen uncomfortable until the obsolete "loving cup" has been supplanted by the very modern electric refrigerator.

## HARRISBURG TOPPERS PUT IN BUSY SESSION AT SCHENECTADY

**Harrisburg, Pa.**—Leading Toppers and other men belonging to the N. K. Ovalle, Inc., organization, spent a day recently at Schenectady, N. Y., touring the General Electric refrigeration unit and cabinet production departments, photophone studios, and research laboratories.

They ate breakfast in the G. E. plant officers' dining room, luncheon in the plant cafeteria, and dinner at the Mayfair Country club.

Toppers who comprised the party were L. H. McGuire, J. C. Durborow, H. A. Kreidler, C. B. Latshaw, P. A. Martin, C. A. Poticher, J. A. Brandt, Taylor McCracken, M. E. Turner, R. H. Shaub, H. D. Church, M. R. Millard, J. W. Garberich, and B. T. Garlick.

Others in the group were I. J. Marks, C. A. Paviak, R. E. Stickel, W. M. Welch, P. T. Schiffman, C. K. Johnston, B. W. Simpson, Keith Allen, C. G. Getrost, R. Kriner, H. T. Hamaker, O. K. Peffley, H. T. Grim, V. M. Meyers, W. R. Withers, L. D. Wasson, and W. M. Hutchinson.

## INTERNATIONAL FILTER MOVES OFFICES

**Chicago, Ill.**—International Filter Co. and associated companies, International Water Softener Co. and General Zeolite Co., announce that expansion of manufacturing facilities required the removal of general offices and engineering departments from Plant No. 1 at 333 West 25th Place, Chicago, to larger quarters covering the 13th and part of the 14th floor of the Buckingham building, 59 E. Van Buren street.

# SALES RECORDS BEATEN IN WESTERN MICHIGAN

**Grand Rapids, Mich.**—The C. H. Stull company, western Michigan distributors of G. E. refrigerators, broke all sales records for the territory in April, this month topping by 10 per cent any previous month and in June the sales showed an increase of 25 per cent over April.

C. H. Stull states one reason for this record, as he views it, is that the dealers in the territory have become more used to the line, better able to present it and clinch sales. The field contact men have been very active and all dealer displays and advertising have been well checked up. A. E. Truax covers the southern district, F. H. Stull the central, and J. Zweedyk the northern district.

Central Electric Company at Battle Creek, and C. D. Brown & Son, at Kalamazoo, have so far topped last year's sales by 100 per cent and are the leaders on sales to date.

## MITCHELL TO MANAGE NEW COPELAND FIRM

**Amarillo, Tex.**—Boone-Kemp, Inc., has opened quarters at 411 West Seventh St., where a number of Copeland refrigerators are now on display. Irving N. Mitchell has been named manager.

## PRENTICE INSTALLS 43 G. E. UNITS

**Seattle, Wash.**—Forty-three model G 40 General Electric refrigerators were installed by the Gordon Prentice, Inc., of Fifth Avenue, Seattle, distributors, in the new Casarucia Apartments.

John R. King and Henry W. Shutte have recently been appointed as apartment house specialists of the Prentice organization.

## NEW SERVEL DEALER IN SHREVEPORT

**Shreveport, La.**—The Johnson Furniture Company of Shreveport, recently appointed dealers and distributors of Servel refrigeration, has appointed the following local dealers: Shreveport Tent & Awning Company, Bewley Furniture Company, and the Wade-Buswell Furniture Company. The refrigeration department of the Johnson Furniture Company is under the supervision of J. R. C. Moseley.

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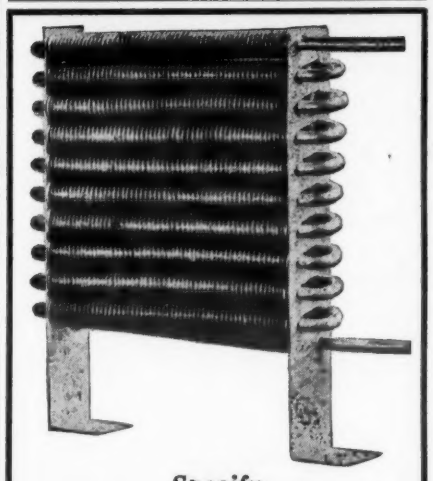
**VALVE** Needles
**VALVE** Seats
**VALVE** Mechanisms
*Four years of satisfactory service to the industry*
**Buerk Tool Works**
42 Pearl St. Buffalo, N.Y.



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for individual coolers and circulating systems—will cure your water cooler troubles—will remove taste, odor, sediment, discoloration—low initial cost—minimum servicing requirements—made in four sizes—write for quotations.
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PULMOSAN CANISTER RESPIRATOR
No. 53 PULMOSAN Canister Mouthpiece Respirators, with flexible tubing, and positive flutter valve, give *positive* protection against SO₂ fumes.
Air-tight goggles can be supplied.
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Manufacturer of perfected and proven domestic and commercial refrigerating machines wants to contact with parties having plant and capital to properly handle manufacturing and sales of product on large scale. Address Box 272.

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*Provides an Ideal Temperature Range on Household Refrigerator*

The Ranco Control for 1930 has many refinements and basic improvements which make it more than ever the ideal control for the modern household refrigerator.

WRITE FOR INFORMATION

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# *Latest Patents Forecast Number of New*

## ISSUED JUNE 3

1,761,551—REFRIGERATING SYSTEM. Eastman A. Weaver, Brookline, Mass., assignor, by mesne assignments, to Stator Refrigeration, Inc., a Corporation of Delaware. Filed Aug. 23, 1924 Serial No. 733,699. 31 Claims. (Cl. 62—115.)

1,761,553—HOUSEHOLD APPARATUS Lyman F. Whitney, Boston, Mass., assignor, by mesne assignments, to Stator Refrigeration, Inc., a Corporation of Delaware. Filed Jan. 6, 1927. Serial No. 159,345. 13 Claims. (Cl. 62—115.)

1,761,573—VALVE. Alvar Lenning, Jackson Heights, and Robert Seth Taylor, New York, N. Y., assignors to Electrolux Servel Corporation, New York N. Y., a Corporation of Delaware. Filed May 21, 1929. Serial No. 364,787. 9 Claims. (Cl. 236—93.)

1,761,606—REFRIGERATION. Lyman F Whitney, Boston, Mass., assignor, by mesne assignments, to Stator Refrigeration, Inc., a Corporation of Delaware. Filed Jan. 6, 1927. Serial No. 159,344. 18 Claims. (Cl. 62—115.)

1,761,610—COOLER. Ernest R. Burchiel, Tacoma, Wash. Filed Aug. 1, 1927. Serial No. 209,972. 1 Claim. (Cl. 45—134.)

1,761,629—COMBINATION DRIP PAN AND BAFFLE MEMBER FOR REFRIGERATING CASES. Howard M. Hunt, Huntington Park, Calif., assignor to Smoot-Holman Co., Inglewood, Calif. Filed July 11, 1928. Serial No. 291,732. 5 Claims. (Cl. 62—89.6.)

1,761,762—REFRIGERATING APPARATUS AND METHOD. Lyman F. Whitney, Boston, Mass., assignor, by mesne assignments, to Stator Refrigeration, Inc., a Corporation of Delaware. Filed Jan. 6, 1927. Serial No. 159,343. 19 Claims. (Cl. 62—178.)

1,761,839—ABSORPTION REFRIGERATING MACHINE. Anders Johan E: Son Munters, Stockholm, Sweden. Filed June 3, 1926, Serial No. 113,445, and in Sweden July 10, 1925. 2 Claims. (Cl. 62—5.)

1,761,981—FINNED TUBE. Harry W. Bundy, Detroit, Mich., assignor, by mesne assignments, to Bundy Tubing Company, Detroit, Mich., a Corporation of Michigan. Filed July 5, 1927. Serial No. 203,383. 6 Claims. (Cl. 257—262.)

1,762,126—BEVERAGE - DISPENSING DEVICE. Harry Cleveland Smith, New York, N. Y., assignor, by mesne assignments, to Autodrink Corporation, Dover, Del., a Corporation of Delaware. Filed Aug. 25, 1927. Serial No. 215,465. 21 Claims. (Cl. 225—28.)

1,762,138—COMPOSITE CORK BODY, SHEET, BLOCK, ETC., AND METHOD OF PRODUCING SAME. William F. Grupe, Rutherford, N. J., assignor to Armstrong Cork Company, Lancaster, Pa., a Corporation of Pennsylvania. Filed Oct. 1, 1927. Serial No. 223,300. 15 Claims. (Cl. 18—48.)

## ISSUED JUNE 10

R-17,696—THERMOSTATICALLY-CONTROLLED VALVE UNIT. Jean V. Giesler, Knoxville, Tenn., assignor, by mesne assignments, to The Fulton Svlphon Company, Knoxville, Tenn., a Corporation of Delaware. Filed Feb. 21, 1930. Serial No. 430,430. Original No. 1,675,341, dated July 3, 1928, Serial No. 159,499, filed Jan. 6, 1927. 42 Claims. (Cl. 236—34.)

1,762,147—ABSORPTION REFRIGERATING APPARATUS. Edmund E. Allyne, Cleveland Heights, Ohio. Filed Feb. 7, 1929. Serial No. 338,177. 6 Claims. (Cl. 62—118.)

1,762,197—LIQUID TRAP FOR REFRIGERATING SYSTEMS. Albert C. Schickler, Cleveland, Ohio, assignor to Edmund E. Allyne, Cleveland, Ohio. Original application filed June 30, 1927, Serial No. 202,724. Divided and this application filed June 30, 1927. Serial No. 202,725. 4 Claims. (Cl. 251—114.)

1,762,369—REFRIGERATING PROCESS AND APPARATUS. Gardner Tufts Voorhies, Boston, Mass. Filed Mar. 10, 1923. Serial No. 624,143. 3 Claims. (Cl. 62—115.)

1,762,519—BRINE COOLER. Charles A. Moore, Edina, Minn. Filed Apr. 22, 1926. Serial No. 103,778. 2 Claims. (Cl. 257—206.)

1,762,520—AIR CONDITIONING AND CIRCULATING APPARATUS. Charles A. Moore, Edina, Minn. Filed Jan. 3, 1927. Serial No. 158,763. 8 Claims. (Cl. 261—29.)

1,762,521—AIR-CONDITIONING APPLIANCE FOR PRE-COOLING ROOMS. Charles A. Moore, Edina, Minn. Filed Apr. 2, 1927. Serial No. 180,389. 12 Claims. (Cl. 261—11.)

1,762,527—ICE-CREAM-SHIPPING CASE. Earl M. Robinson, Waterloo, Iowa, assignor to Richard L. Hall, Waterloo, Iowa. Filed Jan. 12, 1928. Serial No. 246,362. 5 Claims. (Cl. 150—52.)

1,762,644—REFRIGERATING APPARATUS. John Schurman, Cleveland, Ohio, assignor to York Ice Machinery Corporation, York, Pa., a Corporation of Delaware. Filed Sept. 25, 1928. Serial No. 308,287. 6 Claims. (Cl. 261—116.)

1,762,837—AIR CONDITIONER FOR COMPARTMENTS AND RAILWAY CARS. Clinton F. Shadle, Indianapolis, Ind., assignor, by direct and mesne assignments, to Air Development Company, Inc., a Corporation of New York. Filed July 18, 1927. Serial No. 206,719. 4 Claims. (Cl. 257—18.)

1,763,086—APPARATUS FOR TEMPERING CHOCOLATE AND THE LIKE. Alonzo Linton Bausman, Springfield, Mass., assignor to National Equipment Company, Springfield, Mass., a Corporation of Massachusetts. Filed Dec. 7, 1928. Serial No. 324,552. 6 Claims. (Cl. 257—4.)

1,763,162—REFRIGERATOR - MOTOR - LUBRICATING SYSTEM. Andrew A. Kucher, Chester, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 13, 1925, Serial No. 62,275. Renewed Jan. 21, 1928. 13 Claims. (Cl. 230—207.)

1,763,281—REFRIGERATING SYSTEM. Harry R. Van Deventer, New York, N. Y., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 28, 1923. Serial No. 665,438. 4 Claims. (Cl. 62—115.)

1,763,567—AUTOMATICALLY - CONTROLLED ICE CREAM FREEZER. Aaron T. Simmons and Beverly H. Miles, Bloomington, Ill., assignors to Williams Oil-O-Matic Heating Corporation, Bloomington, Ill., a Corporation of Illinois. Filed May 9, 1928. Serial No. 276,267. 6 Claims. (Cl. 62—114.)

1,763,574—EXPANDING STUFFING BOX. Walter W. Williams, Bloomington, Ill., assignor to Williams Oil-O-Matic Heating Corporation, Bloomington, Ill., a Corporation of Illinois. Filed July 27, 1927. Serial No. 208,682. 1 Claim. (Cl. 286—11.)

## ISSUED JUNE 17

1,763,659—REFRIGERATING APPARATUS. Lester S. Keilholtz and Ernest Dickey, Dayton, Ohio, assignors, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Oct. 23, 1923, Serial No. 670,352. Renewed Mar. 24, 1928. 8 Claims. (Cl. 62—51.)

1,763,673—REFRIGERATOR. Marc Resek, Cleveland Heights, Ohio, assignor to Perfection Stove Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 17, 1928. Serial No. 262,351. 8 Claims. (Cl. 62—118.)

1,763,682—REFRIGERATING APPARATUS. Hugh Wallace, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Feb. 8, 1926. Serial No. 86,770. 5 Claims. (Cl. 248—16.)

1,763,754—EXPANSION ELEMENT. Henri A. Brysselbout, Detroit, Mich., assignor to Copeland Products, Inc., a Corporation of Michigan. Filed Jan. 18, 1928. Serial No. 247,580. 4 Claims. (Cl. 257—36.)

1,763,923—REFRIGERATING APPARATUS. French E. Dennison, Beloit, Wis., assignor to National Refrigeration Corporation of Delaware. Filed July 26, 1928. Serial No. 295,424. 8 Claims. (Cl. 257—28.)

1,763,927—VALVE. Ward S. Ireland, Beloit, Wis., assignor to National Refrigeration Corporation, Beloit, Wis., a Corporation of Delaware. Filed July 17, 1926. Serial No. 123,063. 1 Claim. (Cl. 251—46.)

1,764,051—BOILER ABSORBER FOR REFRIGERATING MACHINES. Stuart Otto, Wilton, Conn., and Ludwig Reichert, Brooklyn, N. Y., assignors to Gas Refrigeration Corporation, Scranton, Pa., a Corporation of Delaware. Filed Mar. 22, 1927. Serial No. 177,314. 8 Claims. (Cl. 62—118.)

1,764,110—AIR DRIER. Ivar Lundgaard, Worcester, Mass., assignor to Devon Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 5, 1926. Serial No. 127,295. 6 Claims. (Cl. 62—136.)

1,764,192—EVAPORATOR FOR REFRIGERATING APPARATUS. Lawrence Bruehl, Brooklyn, N. Y., assignor to Gas Refrigeration Corporation, Scranton, Pa., a Corporation of Delaware. Filed Jan. 4, 1927, Serial No. 158,846. Renewed Mar. 7, 1929. 15 Claims. (Cl. 62—120.5.)

1,764,193—FLUID CONTROL. Lawrence Bruehl, Brooklyn, N. Y., assignor to Gas Refrigeration Corporation, Scranton, Pa., a Corporation of Delaware. Filed Mar. 22. 1927. Serial No. 177,313. 10 Claims. (Cl. 137—153.)

1,764,194—CONTROLLING DEVICE FOR HEAT TRANSFERENCE IN REFRIGERATORS. Lawrence Bruehl and Ludwig Reichert, Brooklyn, N. Y., assignors to Gas Refrigeration Corporation, Scranton, Pa., a Corporation of Delaware. Filed Apr. 4, 1927. Serial No. 180,749. 11 Claims. (Cl. 62—95.)

1,764,195—EVAPORATOR. Lawrence Bruehl, Brooklyn, N. Y., assignor to Gas Refrigeration Corporation, Scranton, Pa., a Corporation of Delaware. Filed May 19, 1927. Serial No. 192,530. 11 Claims. (Cl. 62—95.)

1,764,267—APPARATUS FOR AND METHOD OF REFRIGERATION. Charles A. Kohl, St. Louis, Mo., assignor to St. Louis Butchers' Supply Co., St. Louis, Mo., a Corporation of Missouri. Filed Oct. 15, 1925. Serial No. 62,523. 7 Claims. (Cl. 62—104.)

1,764,269—MILK COOLER AND AERATOR. Ralph B. Latterell, Kandiyohi, Minn. Filed May 7, 1928. Serial No. 275,772. 6 Claims. (Cl. 257—74.)

1,764,299—REFRIGERATING DEVICE. Joseph Grison, New York, N. Y. Filed June 15, 1929. Serial No. 371,080. 5 Claims. (Cl. 62—121.)

1,764,643—REFRIGERATOR LINING. Harold L. Pope, Grand Rapids, Mich., assignor to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed May 2, 1927. Serial No. 188,279. 2 Claims. (Cl. 220—63.)

1,764,645—REFRIGERATING APPARATUS. John R. Replogle, Detroit, Mich., assignor, by mesne assignments, to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed Sept. 11, 1926. Serial No. 134,790. 11 Claims. (Cl. 62—115.)

1,764,652—MECHANICAL REFRIGERATION. Charles C. Spreen, Detroit, Mich., assignor, by mesne assignments, to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Original application filed Jan. 2, 1925, Serial No. 133. Divided and this application filed Nov. 5, 1925. Serial No. 66,981. 4 Claims. (Cl. 62—116.)

1,764,653—MECHANICAL REFRIGERATION. Charles C. Spreen, Detroit, Mich., assignor to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed Oct. 22, 1926. Serial No. 143,313. 1 Claim. (Cl. 62—6.)

1,764,654—COMPRESSOR CONDENSER UNIT. Charles C. Spreen, Detroit, Mich., assignor to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed June 3, 1927. Serial No. 196,299. 11 Claims. (Cl. 62—115.)

1,764,655—COMPRESSOR. Charles C. Spreen, Detroit, Mich., assignor to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed Nov. 7, 1927. Serial No. 231,499. 2 Claims. (Cl. 230—190.)

1,764,701—BEARING SEAL. Charles C. Spreen, Detroit, Mich. Filed Dec. 30, 1926. Serial No. 157,935. 1 Claim. (Cl. 286—11.)

1,764,702—REFRIGERATION. Charles C. Spreen, Detroit, Mich., assignor to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed Mar. 25, 1927. Serial No. 178,484. 4 Claims. (Cl. 62—95.)

1,764,716—CONDENSER. Raymond N. Ehrhart, Edgewood, Pa., assignor to Elliott Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 11, 1926. Serial No. 87,545. 18 Claims. (Cl. 257—43.)

1,764,723—REFRIGERATING SHOW CASE. Albert A. Hoppenrath, Minneapolis, Minn. Filed Feb. 27, 1928. Serial No. 257,245. 1 Claim. (Cl. 62—37.2.)

1,764,749—CONTROL MECHANISM FOR MECHANICAL REFRIGERATING APPARATUS. John R. Replogle, Detroit, Mich., assignor, by mesne assignments, to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Original application filed June 6, 1921, Serial No. 475,344, and in Canada Feb. 11, 1922. Divided and this application filed Nov. 3, 1927. Serial No. 230,745. 2 Claims. (Cl. 62—4.)

1,764,761—MACHINE SUPPORT. Charles C. Spreen, Detroit, Mich., assignor to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed Dec. 30, 1926. Serial No. 157,944. 1 Claim. (Cl. 248—16.)

1,764,762—REFRIGERATION. Charles C. Spreen, Detroit, Mich., assignor to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed Jan. 7, 1927. Serial No. 159,623. 6 Claims. (Cl. 62—89.)

1,764,784—MECHANICAL REFRIGERATION. Hadley F. Freeman, Lakewood, Ohio, assignor, by mesne assignments, to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed Aug. 20, 1926. Serial No. 130,443. 2 Claims. (Cl. 62—4.)

1,764,787—ICE-CUBE TRAY FOR REFRIGERATORS. Charles T. Hatch, Albion, Mich., assignor to Union Steel Products Company, Albion, Mich. Filed May 6, 1929. Serial No. 360,640. 8 Claims. (Cl. 62—111.)

1,764,857—REFRIGERATOR - GASKET MOLD. Percy T. Sealey, Grand Rapids, Mich., assignor to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed June 17, 1927. Serial No. 199,517. 3 Claims. (Cl. 18—55.)

1,764,858—REFRIGERATION. Charles C. Spreen, Detroit, Mich., assignor to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed Nov. 5, 1926. Serial No. 146,386. 1 Claim. (Cl. 20—35.)

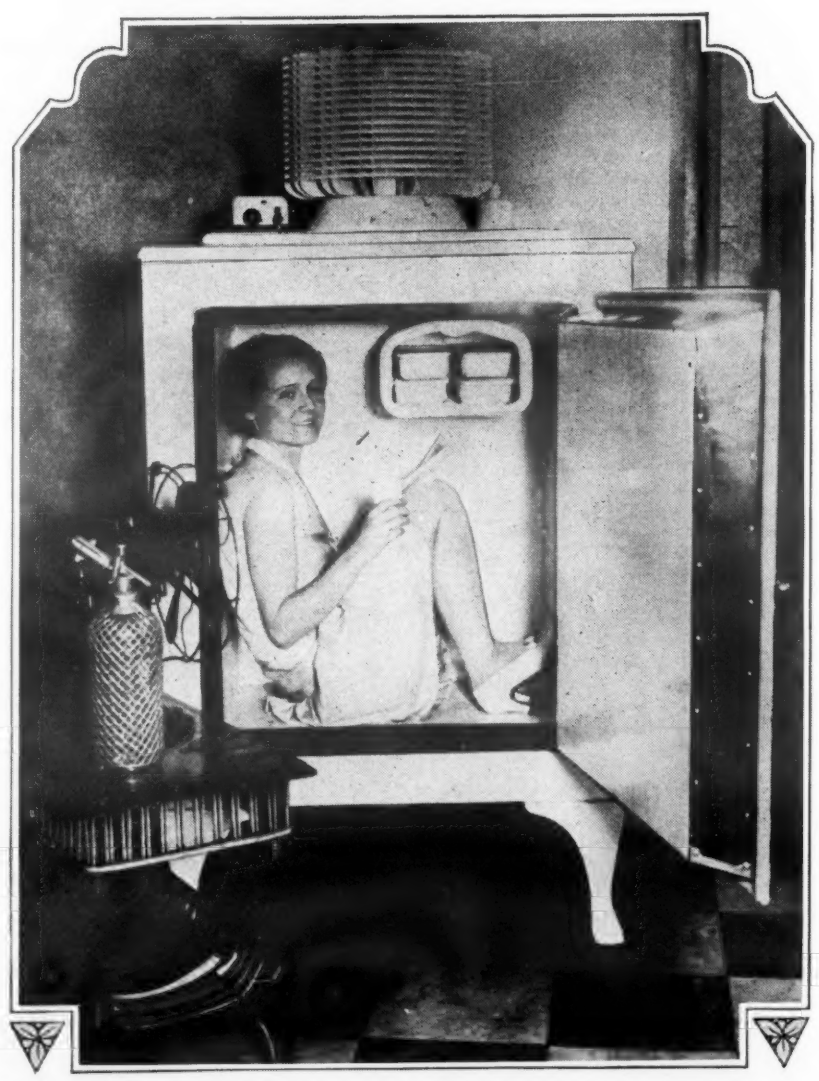
1,764,953—COMPRESSOR. Delos P. Heath, Detroit, Mich. Filed Jan. 6, 1926. Serial No. 79,559. 1 Claim. (Cl. 230—190.)

1,765,001—COOLING TOWER. William Spencer Bowen, Westfield, N. J. Filed May 1, 1929. Serial No. 359,441. 2 Claims. (Cl. 261—89.)

1,765,037—COCOA COOLING APPARATUS. Walter Wain, Fulton, N. Y. Filed Mar. 29, 1927. Serial No. 179,384. 3 Claims. (Cl. 257—23.)

1,765,211—REFRIGERANT. Joseph G. Davidson, Yonkers, N. Y., assignor to Carbide and Carbon Chemicals Corpo-

## *Cool Torch*



**Dayton, Ohio**—By unique use of the General Electric refrigerator, an electric fan and a Sparklet syphon, the problem of how to keep cool when the thermometer registers in the 90's has been successfully solved by Mrs. Lawrence Torch, this city. This method is not adapted, however, for people in the heavyweight class, unless they are contortionists.

Judging by Mrs. Torch's pleasant countenance, one is led to believe that she is really enjoying the refrigerated air in the General Electric. Maybe before long, when a salesman encounters a tough prospect, he might say, "Lady, when the mercury hits the top you can crawl or squeeze into your refrigerator and thus cool off."

# Improvements in Electric Refrigeration

ration, a Corporation of New York. Filed Apr. 7, 1927. Serial No. 181,866. 6 Claims. (Cl. 252—5.)

1,765,226—CONTAINER FOR DRY-ICE PACKS. Levi W. Fountain, Philadelphia, Pa., assignor to Strawbridge & Clothier, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 25, 1928. Serial No. 272,734. 3 Claims. (Cl. 229—9.)

1,765,289—REFRIGERATING MACHINE. Christian Steenstrup, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 29, 1928. Serial No. 329,108. 20 Claims. (Cl. 230—206.)

1,765,296—REFRIGERATOR ATTACHMENT. Nick Stefanide, Linwood, Pa., assignor of one-half to Theodore Christy, Linwood, Pa. Filed Sept. 8, 1928. Serial No. 304,715. 5 Claims. (Cl. 62—75.)

## ISSUED JUNE 24

1,765,387—TEMPERATURE CONTROL. Lawrence E. Warner, New Hartford, N. Y., assignor to Savage-De Remer Corporation, New York, N. Y., a Corporation of New York. Filed Aug. 14, 1926. Serial No. 129,125. 5 Claims. (Cl. 236—1.)

1,765,656—ART OF REFRIGERATION. Barton H. Coffey, Elizabeth, N. J. Original application filed Aug. 9, 1920, Serial No. 402,403. Divided and this application filed Nov. 17, 1925. Serial No. 69,624. 8 Claims. (Cl. 62—115.)

1,765,657—ART OF REFRIGERATION. Barton H. Coffey, Elizabeth, N. J. Filed Dec. 21, 1925. Serial No. 76,697. 8 Claims. (Cl. 62—115.)

1,765,674—REFRIGERATION APPARATUS. Walter A. Inman and Alvin L. Brumond, Waukegan, Ill. Filed Mar. 13, 1923. Serial No. 624,817. 3 Claims. (Cl. 62—115.)

1,765,710—APPARATUS FOR MANUFACTURING FROZEN CONFECTIONS. Albert C. Wood, Philadelphia, Pa., and Thomas Hall, Harrisburg, Pa. Filed Sept. 22, 1927. Serial No. 221,194. 15 Claims. (Cl. 62—114.)

1,765,747—FREEZER FOUNTAIN. Charles Taylor, Beloit, Wis., assignor to Taylor Freezer Corporation, South Beloit, Ill., a Corporation of Delaware. Filed Nov. 30, 1928. Serial No. 322,856. 9 Claims. (Cl. 62—101.)

1,766,020—BRINE TANK FOR ICE PLANTS. Norman H. Gay, Los Angeles, Calif. Filed Sept. 13, 1926. Serial No. 135,134. 1 Claim. (Cl. 62—160.)

1,766,172—ICE CREAM FREEZER. William A. Hiles, Cleveland, Ohio. Filed Jan. 15, 1930. Serial No. 420,866. 16 Claims. (Cl. 259—122.)

1,766,547—BOTTLE COOLER. John M. Schilling, Lima, Ohio. Filed Sept. 21, 1927. Serial No. 220,896. 17 Claims. (Cl. 312—36.)

1,767,316—REMOVABLE SUPPORTING DEVICES FOR REFRIGERATOR SHELVES. Percy T. Sealey, Grand Rapids, Mich., assignor to Kelvinator Corporation, Detroit, Mich., a Corporation of Michigan. Filed Aug. 25, 1927. Serial No. 215,337. 1 Claim. (Cl. 248—18.)

1,767,413—SEAL FOR COMPRESSORS. Charles C. Spreen, Detroit, Mich. Filed Apr. 22, 1927. Serial No. 185,785. 2 Claims. (Cl. 286—11.)

1,767,616—SANITARY FROSTPROOF COLLAR. David B. Reese, St. Paul, Mich. Filed Aug. 16, 1927. Serial No. 213,308. 7 Claims. (Cl. 62—75.)

1,767,639—ABSORPTION MACHINE. Edmund Altenkirch, Alt-Landsberg-Sud, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, a Corporation of Germany. Filed Oct. 27, 1927, Serial No. 229,074, and in Germany Oct. 30, 1926. 10 Claims. (Cl. 62—119.5.)

1,767,857—COMBINED REFRIGERATING TANK AND ICE CREAM FREEZER. Albert F. Sawyer, Haverhill, Mass., assignor to Irving L. Keith, Haverhill, Mass. Filed Oct. 30, 1928. Serial No. 316,084. 5 Claims. (Cl. 62—95.)

1,767,976—MILK - SHIPPING CABINET. Jacob H. Graves, Lexington, Ky. Filed Oct. 30, 1928. Serial No. 316,020. 1 Claim. (Cl. 62—46.)

1,768,059—CARBON - DIOXIDE - SNOW COMPRESSOR. Louis W. Hassensall, Toledo, Ohio. Filed May 22, 1929. Serial No. 365,211. 11 Claims. (Cl. 62—121.)

1,768,258—CONDENSER. Robert L. King, Richmond, Va. Filed July 21, 1927. Serial No. 207,490. 5 Claims. (Cl. 257—39.)

1,768,417—REFRIGERATING APPARATUS. Olaf C. Olsen, Cleveland, Ohio, assignor of two-thirds to The Borden Company, Warren, Ohio, a Corporation of Ohio. Filed May 2, 1927. Serial No. 188,093. 4 Claims. (Cl. 62—8.)

## ISSUED JULY 1

1,768,556—REFRIGERATING APPARATUS. Frank W. Andrews, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Feb. 28, 1927. Serial No. 171,485. 12 Claims. (Cl. 257—39.)

1,768,557—REFRIGERATING APPARATUS. Frank W. Andrews, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Feb. 28, 1927. Serial No. 171,486. 5 Claims. (Cl. 62—4.)

1,768,558—REFRIGERATING APPARATUS. Frank W. Andrews, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Apr. 28, 1927. Serial No. 187,350. 4 Claims. (Cl. 62—127.)

1,768,559—REFRIGERATING APPARATUS. Frank W. Andrews, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Apr. 28, 1927. Serial No. 187,351. 5 Claims. (Cl. 62—95.)

1,768,565—ELECTRICAL APPARATUS. John G. Campbell, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Mar. 6, 1924. Serial No. 697,396. 7 Claims. (Cl. 172—279.)

1,768,566—REFRIGERATING APPARATUS. Harry T. Chamberlin, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Oct. 26, 1927. Serial No. 228,926. 4 Claims. (Cl. 62—34.)

1,768,569—REFRIGERATING APPARATUS. Sidney Claiborne, Fort Worth, Tex., assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Apr. 30, 1927. Serial No. 187,927. 10 Claims. (Cl. 62—95.)

1,768,593—REFRIGERATING APPARATUS. George F. Hofferberth, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Feb. 28, 1927. Serial No. 171,437. 13 Claims. (Cl. 62—89.)

1,768,599—REFRIGERATING APPARATUS. William C. Holbrook, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Oct. 17, 1927. Serial No. 226,547. 5 Claims. (Cl. 182—20.)

1,768,600—REFRIGERATING APPARATUS. Harry B. Hull, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Apr. 30, 1923. Serial No. 635,521. 5 Claims. (Cl. 236—99.)

1,768,601—REFRIGERATING APPARATUS. Harry B. Hull and Clarence Warner, Dayton, Ohio, assignors, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Sept. 26, 1923. Serial No. 664,827. 2 Claims. (Cl. 62—116.)

1,768,602—REFRIGERATING APPARATUS. Harry B. Hull, Dayton, Ohio, assignor to Frigidaire Corporation, Dayton, Ohio, a Corporation of Delaware. Filed Apr. 30, 1928. Serial No. 273,854. 9 Claims. (Cl. 62—4.)

1,768,603—REFRIGERATING APPARATUS. Harry B. Hull, Dayton, Ohio, assignor to Frigidaire Corporation, Dayton, Ohio, a Corporation of Delaware. Continuation of application Serial No. 48,525, filed Aug. 6, 1925. This application filed Oct. 2, 1929. Serial No. 396,652. 10 Claims. (Cl. 62—4.)

1,768,606—REFRIGERATING APPARATUS. Lester S. Keilholtz and Clarence Warner, Dayton, Ohio, assignors, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Oct. 3, 1923. Serial No. 666,240. 6 Claims. (Cl. 286—11.)

1,768,609—REFRIGERATING APPARATUS. Jesse G. King, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Oct. 23, 1923, Serial No. 670,358. Renewed Dec. 3, 1927. 8 Claims. (Cl. 236—1.)

1,768,610—PUMP OR REFRIGERATING APPARATUS. Jesse G. King and Harry B. Hull, Dayton, Ohio, assignors, by mesne assignments, to General Motors Research Corporation, Detroit, Mich., a Corporation of Delaware. Original application filed May 7, 1923, Serial No. 637,136. Divided and this application filed Aug. 25, 1924. Serial No. 733,886. 1 Claim. (Cl. 62—115.)

1,768,611—REFRIGERATING APPARATUS. Jesse G. King and Otto M. Summers, Dayton, Ohio, assignors, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed July 21, 1926. Serial No. 123,892. 7 Claims. (Cl. 62—115.)

1,768,612—REFRIGERATING APPARATUS. Jesse G. King, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Nov. 20, 1926. Serial No. 149,746. 5 Claims. (Cl. 62—75.)

1,768,614—REFRIGERATING APPARATUS. Walter E. Lacey, Springfield, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, Dayton, Ohio, a Corporation of Delaware. Filed Sept. 2, 1926. Serial No. 133,197. 3 Claims. (Cl. 257—36.)

1,768,625—REFRIGERATING APPARATUS. Olaf C. Olsen, Dayton, Ohio, assignor to Frigidaire Corporation, Dayton, Ohio, a Corporation of Delaware. Filed Mar. 30, 1929. Serial No. 351,287. 11 Claims. (Cl. 74—14.)

1,768,638—PUMP FOR REFRIGERATING APPARATUS. John H. Sheats, Dayton, Ohio, assignor to Frigidaire Corporation, Dayton, Ohio, a Corporation of Delaware. Filed Apr. 30, 1929. Serial No. 359,332. 2 Claims. (Cl. 230—228.)

1,768,642—REFRIGERATING APPARATUS. Otto M. Summers, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed July 30, 1927. Serial No. 209,546. 9 Claims. (Cl. 62—111.)

1,768,643—REFRIGERATING APPARATUS. Otto M. Summers, Dayton, Ohio, assignor to Frigidaire Corporation, Dayton, Ohio, a Corporation of Delaware. Filed Jan. 31, 1928. Serial No. 250,823. 4 Claims. (Cl. 210—166.)

1,768,646—MOUNTING FOR A DRIVING AND A DRIVEN DEVICE. Hugh Wallace and Francis E. Stevenson, Dayton, Ohio, assignors, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Nov. 3, 1926. Serial No. 145,933. 4 Claims. (Cl. 308—11.)

1,768,647—REFRIGERATING APPARATUS. Clarence Warner, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corporation, a Corporation of Delaware. Filed Mar. 6, 1926. Serial No. 92,794. 1 Claim. (Cl. 286—11.)

1,768,774—REFRIGERATOR CABINET. George W. Mason, Detroit, Mich., assignor to Copeland Products, Inc., Detroit, Mich., a Corporation of Michigan. Filed May 8, 1926. Serial No. 107,578. Renewed May 5, 1930. 3 Claims. (Cl. 62—116.)

1,768,800—ILLUMINATING DEVICE FOR REFRIGERATORS, DISPLAY CASES, AND THE LIKE. Joseph C. Steiner, St. Louis, Mo. Filed Jan. 14, 1928. Serial No. 246,804. 3 Claims. (Cl. 240—6.)

1,768,807—COMPRESSOR - VALVE STRUCTURE. Harry E. Thompson, Detroit, Mich., assignor to Universal Cooler Corporation, Detroit, Mich., a Corporation of Michigan. Filed Feb. 15, 1926. Serial No. 88,243. 6 Claims. (Cl. 251—145.)

1,768,886—TEMPERATURE - CONTROL MEANS FOR REFRIGERATORS. Henry G. Butzow, Sycamore, Ill. Filed May 29, 1929. Serial No. 367,105. 6 Claims. (Cl. 200—83.)

1,768,916—MILK COOLER. Clyde M. Lancaster, near Waco, Tex. Filed Aug. 13, 1928. Serial No. 299,277. 4 Claims. (Cl. 257—190.)

1,769,017—REFRIGERATING PROCESS AND APPARATUS. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 30, 1926. Serial No. 151,671. 25 Claims. (Cl. 62—115.)

1,769,030—SHAFT SUPPORT AND SEAL. Manuel Lassen, Detroit, Mich. Filed Nov. 26, 1926. Serial No. 150,870. 3 Claims. (Cl. 286—11.)

1,769,033—APPARATUS FOR PRECOOLING LADING AT SHIPPING POINTS. Charles A. Moore, Edina, Minn. Filed Jan. 3, 1927. Serial No. 158,766. 12 Claims. (Cl. 257—7.)

1,769,087—FREEZING APPARATUS. Michel P. Vucassovich, Magnolia, Mass. Filed June 1, 1929. Serial No. 367,693. 3 Claims. (Cl. 62—104.)

1,769,088—FREEZING APPARATUS. Michel P. Vucassovich, Gloucester, Mass. Filed July 9, 1929. Serial No. 376,963. 1 Claim. (Cl. 62—104.)

1,769,111—HEAT REMOVAL FROM HEAT-TRANSFORMING APPARATUS. Ransom W. Daveiport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 13, 1926. Serial No. 94,492. 3 Claims. (Cl. 62—116.)

1,769,112—PROCESS OF AND APPARATUS FOR TRANSFORMING HEAT. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed July 21, 1926. Serial No. 94,402. 3 Claims. (Cl. (Cl. 62—170.)

1,769,113—REFRIGERATING PROCESS AND APPARATUS. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 3, 1926. Serial No. 126,782. 15 Claims. (Cl. 62—178.)

1,769,114—PROCESS AND APPARATUS FOR PRODUCING REFRIGERATION. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 3, 1926. Serial No. 126,783. 17 Claims. (Cl. 62—178.)

1,769,115—MECHANICAL REFRIGERATOR CABINET. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 7, 1927. Serial No. 173,234. 15 Claims. (Cl. 62—116.)

1,769,116—EVAPORATOR FOR REFRIGERATING SYSTEMS. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 5, 1927. Serial No. 181,076. 14 Claims. (Cl. 62—95.)

1,769,117—REFRIGERATING AND ICE-MAKING APPARATUS. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 15, 1927. Serial No. 183,977. 15 Claims. (Cl. 62—116.)

1,769,118—MECHANICAL REFRIGERATOR. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 28, 1927. Serial No. 187,224. 14 Claims. (Cl. 62—116.)

1,769,119—CONDENSING SYSTEM. Ransom W. Davenport, Detroit, Mich., assignor to Chicago Pneumatic Tool Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 6, 1928. Serial No. 244,847. 15 Claims. (Cl. 62—3.)

1,769,265—HEAT EXCHANGER. Otto A. Labus, Wisconsin Rapids, Wis., assignor to American Carbonic Machinery Company, Wisconsin Rapids, Wis., a Corporation of Wisconsin. Filed Apr. 21, 1927. Serial No. 185,529. 3 Claims. (Cl. 257—235.)

New Colonial Apartment House nears completion on Grand Avenue.

**Grand Rapids, Mich.**—The F. C. Matthews Company's summer sales have been greatly augmented by quantity orders for various apartment houses, one of the larger orders being that of A. J. Biferno, who has just installed 30 models in the Iowa and Eastern apartments.

In the Carston apartment, 202 Michigan street, installation has just been completed of seven 4837 AHP models, while K. Hoeksma, in the Paris family apartment, has had installed 6 of the 4837 models.

The Harvey Beuker apartment has ordered 7 of the 4837 AHP models, this installation just being completed.

One of the most beautifully appointed and modern apartments erected in the city is nearing completion on Grand Avenue. This is a 12-family in yellow brick, of entirely new design and being built by Blakeslee brothers, who state that right now they are unusually busy in building lines. The F. C. Matthews company are about to install in this unusual apartment building 12 of the 4837 AHP Frigidaires.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"EBCO"
SELF-CLOSING
AUTOMATIC
STREAM CONTROL
VALVES
FOR DRINKING FOUNTAINS
*. . . Regulate without wasting water*

EXPOSED TYPE
*Chrome plated union inlet—⅜" I. P. outlet, C-1300 2-prong handle, C-1300 H-4 prong handle C-1300 L-Lever handle.*

These valves have proven the most economical combinations for drinking purposes. They provide automatic control of the height of the drinking stream under all fluctuating pressures between 20 and 120 pounds.

EBCO Valve will maintain a constant height of drinking stream, without waste of water or squirting.

WRITE FOR COMPLETE CATALOG OF "EBCO" Valves and Drinking Fountains.

REGULATOR
*for installation in water supply lines to present fountains ⅜" I. P. Inlet and Outlet.*

THE D. A. EBINGER SANITARY MFG. CO.
COLUMBUS, OHIO
*Manufacturers of EBCO Drinking Fountains, Ventilated Urinals and Closets, Round Wash Sinks and Steel Compartments for toilet rooms.*

## LITERATURE OF MANUFACTURERS

Catalogues, bulletins and other material recently issued.

Manufacturers are requested to send copies of new trade literature to Electric Refrigeration News.

**Dry-Kold**

A new display and storage refrigerator for frozen foods is described in a broadside prepared by the "Dry-Kold" Refrigerator Co., Niles, Mich. This model is designed to maintain subfreezing temperature in display and storage compartments. It is available in 6, 8 and 10-foot lengths.

**Reproduction Co.**

Imitation foods for display purposes are illustrated in a catalog released by the Reproductions Company, Boston, Mass. This catalog is available to dealers and distributors. Fruits, vegetables, meats, butter, cheese, milk and cream are reproduced in realistic form.

**Superior**

The many uses for Superior Galvannealed and Super-Metal sheets are illustrated in a catalog issued by the Superior Sheet Steel Co., Canton, Ohio. The refrigerator and the ice cream cabinet are prominently listed. The two sheets mentioned above have special coatings which afford protection against rust. They will retain finishes under severe conditions of use as their surfaces offer a bond for lacquer or baked enamel.

## SALES UP 800% SINCE FIRST OF YEAR

**Louisville, Ky.**—Domestic Kelvinator sales have increased 800 per cent in Louisville since the first of January, according to Thomas Mason, sales manager for this district. Mr. Mason has from ten to fifteen salesmen working under him in the city. These men are on a commission basis, but only productive salesmen are retained. Mr. Mason feels that the psychological effect of the presence of inefficient salesmen is a handicap for those who are making good. He thinks it is fairer both to the men and the company to retain only those who demonstrate that they can sell Kelvinators.

A number of interesting Kelvinator installations have been made recently. One is the Cumberland Apartments. Here ninety apartments were equipped with electric refrigerators.

The box factory of the Mengel Company, 11th and Dumesnil streets, has a number of Temprite units operated by Kelvinator equipment. The Girdler Corporation, manufacturing refrigerator equipment at 1303 South Shelby street, also has Kelvinator water coolers.

## NORGE NAMES DES MOINES DISTRIBUTOR

**Des Moines, Iowa**—Announcement has been made of the appointment of Adams Company, Inc., as Norge distributor. Warehouse and offices will be maintained at 100 South West First Street. The newly appointed distributor also handles radios.

The first retail Norge dealer to be named here is the Anderson Furniture Company, Sixth and Grand Avenue.

## KELVINATOR EXECUTIVES FETE SIECK

**Detroit, Mich.**—Harry A. Sieck, who recently resigned as vice-president in charge of the Kelvinator Ice Cream Cabinet Division to become general sales manager of the Creamery Package Mfg. Co. of Chicago, was tendered a farewell banquet at the Detroit Athletic Club, Monday, July 28, by his associates in the Kelvinator organization. About thirty Kelvinator executives were in attendance.

On this occasion Mr. Sieck was presented with a number of pieces of luggage suitably marked. He was also presented with a richly designed scroll imprinted with a happily worded expression of the good will and best wishes of Kelvinator colleagues, to which was appended their signatures.

## UTILITIES MAKE SPECIAL OFFER TO EMPLOYES

**New York, N. Y.**—Employes of the New York Edison Co., Brooklyn Edison Co., United Electric & Power Co., New York & Queens Electric Light & Power Co., and the Yonkers Electric Light Power Co., can now buy electric refrigerators from their employers at invoice cost, providing they pay cash.

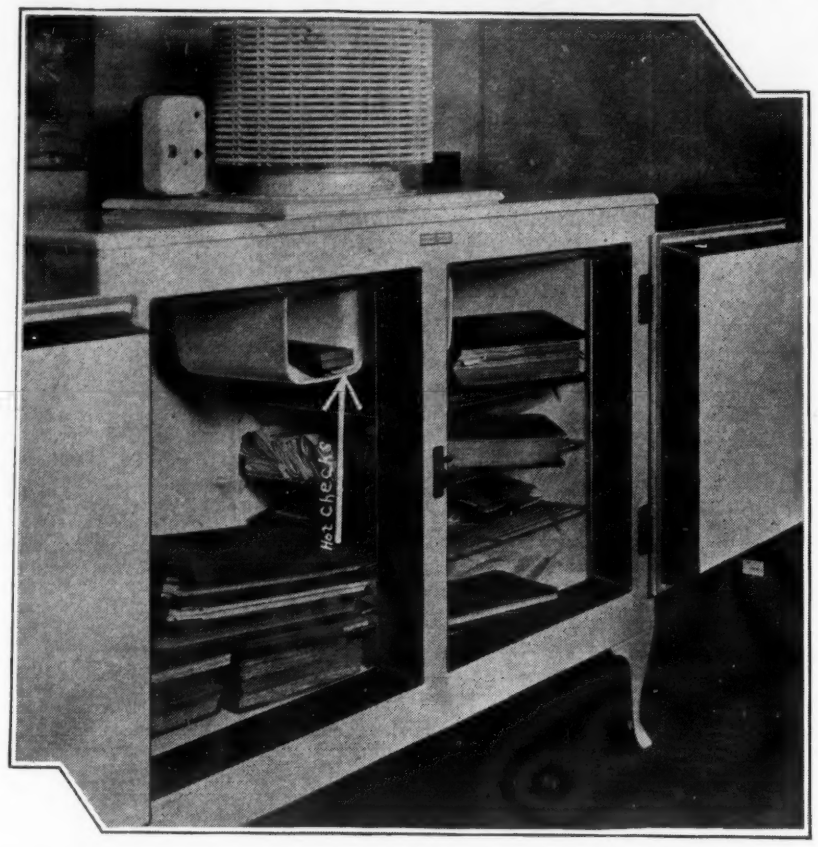
Those who prefer using the deferred payment plan may purchase their refrigerators with a down payment of 10 per cent and payments extending over a period of 10 months at invoice cost plus a carrying charge of 6 per cent added to the unpaid balance.

Only one refrigerator is allowed to an employe under this plan, and it must be for his or her personal use.

## GUY JACKSON GOES TO HUNTINGTON STORE

**Huntington, W. Va.**—Guy A. Jackson has been made manager of the Copeland refrigerator department of the Anderson-Newcomb Co. Mr. Jackson has had wide experience in refrigeration, having been engaged in this work in this locality for the past four years.

## *Frozen Assets*




IT was recently demonstrated by Griswold-Rogers, Inc., Dallas, Texas, distributor, that a General Electric refrigerator could be used for other purposes than keeping foods properly preserved.

During a recent move it was found that another safe was necessary for the protection of the books, etc., against fire. In meeting the emergency, A. C. Rogers, being a very resourceful young man, suggested the temporary substitution of a Model G-175 all-steel refrigerator which, as has been repeatedly proven, will come through a fire with flying colors even though the building is burned to the ground. The arrow shows where the so-called "hot checks" are kept at the proper temperature.

## BEMENT GETS COPELAND ADVERTISING ACCOUNT

**Mt. Clemens, Mich.**—The Copeland Sales Company, marketing organization of Copeland Products, Inc., has placed the advertising of Copeland electric refrigerators under the direction of Austin F. Bement, Incorporated, Detroit, and Chicago advertising agency.

The Bement organization is co-operating with Copeland executives in formulating plans for Copeland's fall selling and advertising activities.

The Bement agency has had a long and wide experience in the merchandising and advertising of quality products, well demonstrated by its work in behalf of Packard motor cars, Hercules heavy-duty engines, Crittall casement windows, La Choy Chinese food products and other articles of exceptional merit.

Actively engaged in serving the Copeland interests are Austin F. Bement, president of the newly appointed agency, Milby W. Lloyd, vice-president and merchandising director, Gordon C. Eldredge, general manager and creative specialist, and French Jenkins of the Bement contact and creative staff.

## G. W. BARKLEY JOINS BELDING-HALL

**Belding, Mich.**—G. W. Barkley, formerly with the Gibson Refrigerator Corp., Greenville, Mich., is now associated with the Belding-Hall Co. Mr. Barkley is the new manager of Factory B.

## BAKER ERECTS NEW PLANT

**Humboldt, Iowa**—The Baker Ice Machine Company of Omaha has erected a plant in this city. The structure is of brick and steel construction and houses the machinery formerly used by the company in its Gilmore City branch.

## *The Expansion Valve*

*By* GEORGE F. TAUBENECK

Salesmen. The sporting element of the industry. Any man who undertakes to make a living by selling on the commission basis must have large and frequent inoculations of sporting blood running through his veins. And any sales manager knows by experience that his topnotchers are not only game sports to the core, but good sports as well.

Successful selling organizations are kept on the qui vive by contests—boat races, baseball games, cup chases, turkey-and-bean dinner challenges—anything that will hook up the selling of refrigerators to the world of sport.

**Every sale is a contest. Many of them stretch into extra-inning affairs before the salesman can make a home run for supper with a signed order. Other contests end in the first round, when the prospect (like Sammy Mandell) is caught off guard with a defense as wide open as a frontier town in the days Zane Grey and Jack London have painted in running water colors.**

**Thus it is that sales stories multiply faster than bacteria do over the 50 degree line, and float around like Ivory soap in a bathtub.**

There is the tale, for instance, of H. G. "Sparky" Selleck, of the Middletown division of the Connecticut Power Co., who spent the major portion of a recent afternoon trying to sell a Frigidaire to a local ice dealer. Sporting instinct? With a vengeance!

And there is the yarn about the Georgia Power Co. salesman who went into a barber shop for a haircut. While waiting the call of "next!" he overheard one of the barbers complain about a shortage of hot water. The salesman promptly and totally forgot his bushy locks, and without further ado sold the shop an electric water heater. After the sale he walked out with his Sampsonian locks still intact, as uncut as the leaves of an old-time book.

**In the same businesslike way, we're going to proceed with no more ado than the Georgia Power salesman to tell you a few miscellaneous stories we've picked up in the past few weeks. They're well shuffled, and have no more orderly connection than a modern bathing suit has back. Here they are: (sources furnished on request).**

"Never let love interfere with work—just combine them"—that's the advice Willis Rich, commercial refrigeration salesman for the Central Maine Power Co. of Augusta, Maine, gives all prospective bridegrooms.

Willis fell in love not long ago, sold the girl of his choice (Miss Evelyn Abbott of Lewistown, Maine) on his present worthiness and future prospects, went on his honeymoon trip, and closed a sale—all in one day's work.

He was married at 6 o'clock in the morning, and was on the job at 8 o'clock. For their honeymoon journey the newlywed Mr. and Mrs. Rich traveled to a neighboring village, where the proud bride watched her husband sell a commercial job to a prospect.

**"If at first you don't succeed," etc., etc. When O. C. Justus, Electrolux salesman for the Central Indiana Gas Co. of Muncie, Ind., was a youngster he made that good old transcript from all copybooks a part of his working mechanism.**

**Not long ago he began selling Electrolux refrigerators—his first adventure into the field of appliance salesmanship. For 27 days he knocked on doors without selling a single refrigerator.**

**Nothing daunted, he went out again on the twenty-eighth day, one hand clasping slowly-accumulated prospect cards, and the other automatically doubled into knocking posture. When he came home that night he carried eight signed orders in his pocket. He is 50 years old.**

L. Kaphengst, an employe of the Lake Geneva branch of the Wisconsin Power & Light Co., reported for work one morning recently dressed in his "tux."

He had an alibi. No, he hadn't been out on an all-night dusk-to-dawn "bender." He had left a dinner party to take a ride in his automobile, and had been forced to walk home. Loud were the huzzahs that greeted Kaphengst's story, and loudest of all were the hoots that came from the stenographic department. At last the tables had been turned in this walking-home-from-a-ride business.

Again his razzing cohorts had the wrong solution. Kaphengst patiently explained that he had been held up by strangers, and forced to abandon his car. Whereupon there was nothing to do but walk back to Lake Geneva, and to work. Fort Atkinson police found his car, deserted, shortly afterward.

**"Hail to the Orange" became the theme song at Rex Cole's main office early this month when the feminine better half of the office adopted en masse G. E.-colored (orange and blue) smocks.**

**The main office now presents a study in orange with touches of blue, topped with blonde, brunette, or titian heads, and rounded out with all the shades of tan in the sunburnt spectrum.**

**Confusion is now vying with anonymity for the right to reign. Miss Brown, who was always so easily distinguishable in her invariable blue, becomes Miss Er-er-er-uh. And the boss discovers that what he took for Miss Rosenberg turns out to be Miss O'Connor.**

**Shakespeare's query, "What's in a name?" has been paraphrased by the Rex Cole organization to "Who's in a smock?"**

## THE CONDENSER

ADVERTISING RATE fifty cents per line (this column only).

SPECIAL RATE if paid in advance — Positions Wanted — fifty words or less, one insertion $2.00, additional words four cents each. Three insertions $5.00, additional words ten cents each. All other classifications—fifty words or less, one insertion $3.00, additional words six cents each. Three insertions $8.00, additional words sixteen cents each.

**POSITIONS AVAILABLE**

SALESMAN familiar with Kelvinator, commercial and domestic. Permanent position in southern territory. Salary and commission. Must have full particulars. Box 270.

**POSITIONS WANTED**

EXECUTIVE refrigeration engineer seeks new connection with manufacturer of commercial refrigerating units. Box 271.

GRADUATE Mechanical Engineer. Factory trained, domestic and commercial lines, desires field position (Service-Manager). Box 268.

SALES manager available. Five years with large refrigeration manufacturer as assistant sales manager. Capable of handling sales management, field work or sales promotion for manufacturer or distributor. Familiar with Western and Southern territories. Box 269.

SALES engineer desires permanent connection with manufacturer or large distributor. Three years' experience in commercial engineering field contacts and sales schools. Capable of organizing and directing sales organization. Would consider foreign connection. Box 266.

PRODUCTION executive available at once, technical and practical man with years of experience with one of the largest concerns. Thoroughly experienced in the production of household and commercial electric refrigeration, including the machining of compressors, coils and complete cabinets, also the operation of modern porcelain plants. Box 265.

**MISCELLANEOUS**

FOR SALE. Forty new cylinders—8 lb. size—4"x23"—for sulphur dioxide, ethyl or methyl chloride. Standard I. C. C. specifications, complete with valve and caps. Bargain. G. S. Robins & Co., St. Louis, Missouri.

DRINKING WATER FAUCETS
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Refrigerators — Water Coolers
New model now available for use on city water pressure

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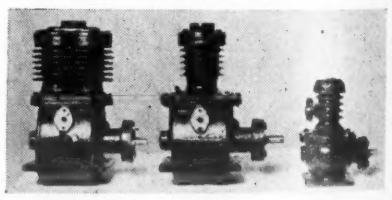
FRIGID ZONE COMPRESSORS
have a wonderful record for service and now A NEW LOW PRICE for those who assemble their own units.



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THE Absopure franchise is an asset whose value will increase as refrigeration comes into its own. Some territory is still open. For details—write or wire the factory.
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# *Refrigerated Food Section*

# ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office.

**The business newspaper of the refrigeration industry**

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## ARGENTINA

### Investigate Possibilities of Quick-Freezing Methods in Use Here

**Washington, D. C.**—Always alive to new developments in the United States, the Argentine government has become interested in the quick freezing of foods and is making a study of the progress made and the problems involved. Manuel G. Durand, Argentine Consul, who is attached to the Argentine Embassy here, is in charge of the studies being made for his government, and recently has been visiting the leading producers of quick-frozen foods in this country. He has just returned from a trip to Chicago.

Clarence Birdseye is largely responsible for the Argentine interest in the subject. Mr. Durand visited him several months ago, and he later sent a small package of quick-frozen products to the Embassy. Mr. Durand passed them around among his friends on the embassy staffs of other South American countries and as a result Mr. Birdseye has received numerous inquiries in regard to his work.

Last winter a shipment of 100 pounds of assorted quick-frozen products was sent to Argentina by Mr. Birdseye and General Foods. The government authorities in Buenos Aires made a thorough investigation of the foods when they arrived and one result of that investigation is Mr. Durand's present assignment. The foods arrived in excellent condition according to reports received here.

Mr. Durand has been much impressed by the energy displayed by the General Foods Corporation in the conduct of its Springfield experimental sales campaign and by the other work which that organization has done in the interests of quick-frozen products.

As the climate of Argentina is much like that of the United States, Mr. Durand believes that if quick-frozen foods prove successful here they will have an equal chance for success in his country.

As great quantities of frozen meats are shipped from Argentine to Europe and America, the possibilities of the new freezing processes are of intense interest to the important producers of meat in the South American country. For that reason the work that is being done in the freezing of meats is of especial interest to Mr. Durand.

## SWIFT'S MEATS

### Still Gaining In Springfield

**Springfield, Mass.**—Measures for increasing sales of the Swift quick-frozen identifiable cuts in this territory are progressing steadily. A large Warren cabinet with Copeland equipment has been installed in the grocery store and market of George C. Chalyin at 792 State Street. This is of solid construction and with its light oak frame, white enamel panels and porcelain top is pleasing to the eye, and its display case, 9 feet in width, affords room for a good variety of products, including chicken, fowl, oxtails and a general variety of beef, veal, lamb and pork cuts.

This installation is regarded with special interest by local representatives of Swift & Co., and its advantages also are said to be under investigation by officials of the General Foods Corporation, on account of the Warren Co.'s patented devices enabling quick defrosting without removing the contents from the case and generally holding frost down to a minimum.

Hussmann-Copeland installations are being made in five Springfield stores of the A. H. Phillips chain. The number of General Electric installations of the special type previously described in these columns is being increased by sales to small independent stores in the city and suburbs. Arrangements have been made for installing Hill cabinets in other stores. Developments here point to sharp competition among makers of various lines of equipment.

No local advertising campaign has been started for the Swift line of frozen meats and sales gains have been moderate but continuous. In some instances the Swift line will be on sale in close proximity to stores handling the Birdseye line.

## *A BENEVOLENT GOVERNMENT*

CHILLED wines for the Chileans is on the Government program in that South American country, according to the Cold Storage and Produce Review of London. Here is the story just as the British magazine tells it. Perhaps the hot spell will be over before it reaches the readers of the Refrigerated Food section. Anyone who receives his copy while the mercury is at the top of the thermometer is excused.

"The Government of Chili, South America, plans to construct storage warehouses for wines in a number of producing districts. The programme includes the building of eleven warehouses, each having a capacity of 50,000 hectolitres of wine, eight with a capacity of 25,000 hectolitres, and terminal warehouses at the ports of Valparaiso, San Antonio, Constitucion, and Talcahuano. Each warehouse will contain equipment for the ageing of wines and refrigerating installation for the storage of these wines and fresh grapes. A feature of the South American railway exhibition held in Santiago a month or two back was the initiative displayed by German manufacturers. Special refrigerator cars were among the rolling stock sent out from Germany for display, and it is stated that several were sold on the spot."

## *Kuken and Kelvinator*

A DUTCH kitchen booth at the Des Moines garden show, held recently, displayed a new Kelvinator model. More than 50,000 people attended this exhibition, the great majority of whom visited this Dutch kitchen.

The kitchen carried out the quaint old Dutch theme in every detail, even to the costumed maid seen at work in the "spick and span" kitchen. Some vastly intriguing "kuken" is spread on the old-fashioned table with its checkered tablecloth of another era. The rush bottomed chairs, the pots and pans and kettles and the dishes all harmonize with the Dutch theme. *Better Homes and Gardens*, published at Des Moines, sponsored the display.

## COLD WATER

### Encountered Frequently Abroad

**New York, N. Y.**—J. Estes, manager of the Export Department of the Liquid Cooler Corporation, has just returned to his headquarters here from a trip covering most of the countries in Europe.

He reports, that without exception, refrigeration distributors, beverage manufacturers and soda fountain people are extremely interested in learning more about and in using American types of liquid cooling equipment. A particularly interesting observation, is that the demand for cold drinking water service in such cities as London, Paris, Berlin, Madrid, etc., is much greater than in previous years and is rapidly growing.

This changed situation, in Mr. Estes' opinion, is due to the large amount of tourist travel in foreign countries. Americans touring Europe expect ice water service in the hotel at which they stop.

Mr. Estes also found Europe a profitable market for beverage cooling units. As a result of his contact with chain restaurant managements, beverage and soda fountain manufacturers, a considerable number of Temprite units for cooling both water and beverages will be shipped to European countries during the next few weeks.

### THIRTY-FOUR STORES IN KANSAS GET LIPMANS

**Kansas City, Mo.**—The General Refrigeration Co., 1931 Main St., recently installed thirty-four commercial Lipman units in stores operated by the United Stores Co. Twenty-two Models 151 and twelve Models 201 were used. These stores are located in various towns and cities in Kansas.

A Lipman Model 710 has been purchased by Dr. Pepper's Bottling Co. in Springfield, Mo. This company is marketing a new and increasingly popular soft drink called "Dr. Pepper," and it is essential to have the water cooled to at least 37 degrees temperature in order to take high carbonation.

## RECORD CHERRY

### Crop Keeps Freezers Busy

**Traverse City, Mich.**—A record cherry crop is being packed here, and the freezing equipment of the Grand Traverse Packing Company, now being operated by the Michigan Cherry Growers in co-operation with the Fruit Growers' Union of Sturgeon Bay, Wisconsin, is working at full capacity. The new plan, under which aid was guaranteed if needed by the Federal Farm Board, seems to be working out smoothly, and good profits as well as good cherries are expected.

The season is now at its peak, and an increased number of growers are bringing their cherries to the various factories of the Michigan Cherry Growers, where the fruit is pitted and packed before being sent here for freezing. A. J. Rogers, president of the Union, is one of the busiest men in this section of the country. He has his own crop at Beulah on his hands as well as the responsibility of handling the affairs of the whole cherry growing region.

### URUGUAY IS INTERESTED

**Chicago, Ill.**—Uruguay is manifesting an interest in quick-frozen meats. Carlos Maris Reyles, of the Casa Blanca of Montevideo, was in this city recently visiting the various packing plants. He expressed a strong interest in quick freezing and was anxious to collect all available information in regard to the subject.

## SOUTH PLANS

### Co-operation in Marketing

REPRESENTATIVES of departments of agriculture from seven Southern states are attempting to organize a large co-operative marketing association for fruits and vegetables. Present methods of distributing fruits and vegetables are far from satisfactory on account of the competition between states and districts.

The Federal Farm Board and the Federal Bureau of Agricultural Economics are interested in this latest move in establishing federated state and district organizations.

One of the problems that probably will be considered will be the freezing of fruits and vegetables. During the last two years the South has been very interested in freezing of berries and peaches. W. R. Tucker developed a process of freezing of Georgia peaches and at the present time the Tom Huston Frozen Foods, Inc., Montezuma, Ga., is using his system in the new freezing plant which it recently opened. This plant was described in detail in the Refrigerated Food Section of the July 16th issue of the NEWS.

### Z PLUS Z

**Chicago, Ill.**—W. Zarotschenzeff, who has been with the engineering forces of Armour & Co. for some time, has obtained a leave of absence and is planning to join his father, M. T. Zarotschenzeff, in England. How long he will remain with his father, the younger Zarotschenzeff is not certain at present. He is greatly interested in the work which is being carried on at Warrington for the Liverpool Refrigeration Company.

### CONNECTICUT PROGRESSIVE

**Meriden, Conn.**—Fred L. Yale & Son, uptown grocers, have added a quick frozen meat department. A large Lig-o-nier refrigerator case equipped with a Frigidaire compressor keeps the products at the correct temperature. A complete line of Swift hard-chilled, ready cut meats is carried.

## DUBUQUE

### Butchers Willing to Listen to Both Sides of Frozen Meat Question

ACTING on the idea that one of the simplest ways to find out what the butchers think about quick-frozen meats was to ask a few of them, a representative of ELECTRIC REFRIGERATION NEWS spent a day in Dubuque, Iowa, recently, during which he interviewed about a dozen retail meat dealers. The calls were made in company with the local representative of the Cudahy Packing Company, who furnished the introduction.

If the butchers of Dubuque are typical of their trade, and there seems no reason to believe that they are not, active opposition by the butchers to the introduction of quick-frozen foods is a good deal of a myth. This does not mean that these men were in favor of the new products, for there was no evidence of that. They either knew little or nothing about quick-frozen meats, or knowing something about them were anxious to learn more. Several who had heard and read about the new packaged and frozen meats frankly expressed the belief that they would not amount to much, at least not for several years, but expressed no rabid opposition to them.

Others looked more favorably on the whole subject, admitted that perhaps the introduction of packaged products would work important changes in the meat business, and seemed perfectly willing to adjust themselves to whatever new conditions might arise.

One and all were interested in the idea and wanted to learn all they could about it.

Among the leading merchants in Dubuque is L. B. Wertz, who operates a modern meat market under the same roof as the Great Atlantic & Pacific Tea Co. The A. & P. sign extends along the whole front of the building, but once inside the customer finds the A. & P. stock on the right, and Mr. Wertz's meats on the left. Mr. Wertz showed no great enthusiasm for quick-frozen or fresh cut packaged meats. He was inclined to believe that the development of the new products will be slow, although he saw no reason for getting excited on the question. He left the impression that if the quick-frozen meats become fashionable in Dubuque he will be very much on the job. So far as the selling of fresh cut, but not frozen, meats is concerned, he has made a big step in that direction himself. Practically all of his meats are cut in the back of the shop out of sight of the customer, and are then put on display in a long rack of McCray refrigerated cases. Three Frigidaire compressors in the basement keep the big cases down to the required temperatures.

Another well known meat and produce retailer in Dubuque is Samuel Rath of the G. C. Rath establishment. Mr. Rath is a progressive merchant, reads his trade publications, and in them has seen numerous articles on quick-frozen meats. As soon as the subject was introduced, he got out a copy of the latest issue of Meat Merchandising and pointed out that at the convention of the National Association of Retail Meat Dealers in Minneapolis next month, quick-frozen foods is to be one of the subjects of discussion. He added that he was going up to Minneapolis to attend the convention and hoped to

*(Concluded on Page 8, Column 1)*

### MEAT RETAILERS TO HOLD 45TH CONVENTION

**Chicago, Ill.**—At the 45th annual convention of the National Association of Retail Meat Dealers which is to be held in Minneapolis, Minn., August 4 to 7, quick-frozen meats is one of the subjects on the program for discussion. One of the scheduled speakers is W. C. Davis of the United States Department of Agriculture at Washington.

As quick-frozen meats are handled by a number of members of the Association, a full and free discussion of both sides of the question is assured. The year-'round headquarters of the Association are maintained in this city under the direction of John A. Kotal, secretary-manager. The coming convention is expected to attract a large attendance.

"Two-Profit" Sales to

ESCO is the "reason-why" your prospect will want a refrigerating unit. Sell him an ESCO to do a definite job and you will also sell him the corresponding unit. One sale — two profits.

Esco Milk Coolers for Dairy Farms open up a vast sales field for your present organization. Esco Coolers for Bottled Milk give you a much wanted proposition for the Milk Dealer. Esco Ice Makers and Soft Drink Coolers sell to hotels, restaurants, clubs, etc.

Without these great prospects you are merely scratching the surface of your opportunity

National advertising, sales helps, data tables—everything to help you. Ask us about it today.

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**Milk Dealers**
**Hotels**
**Restaurants**
**Town Clubs**
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**ESCO CABINET CO.**
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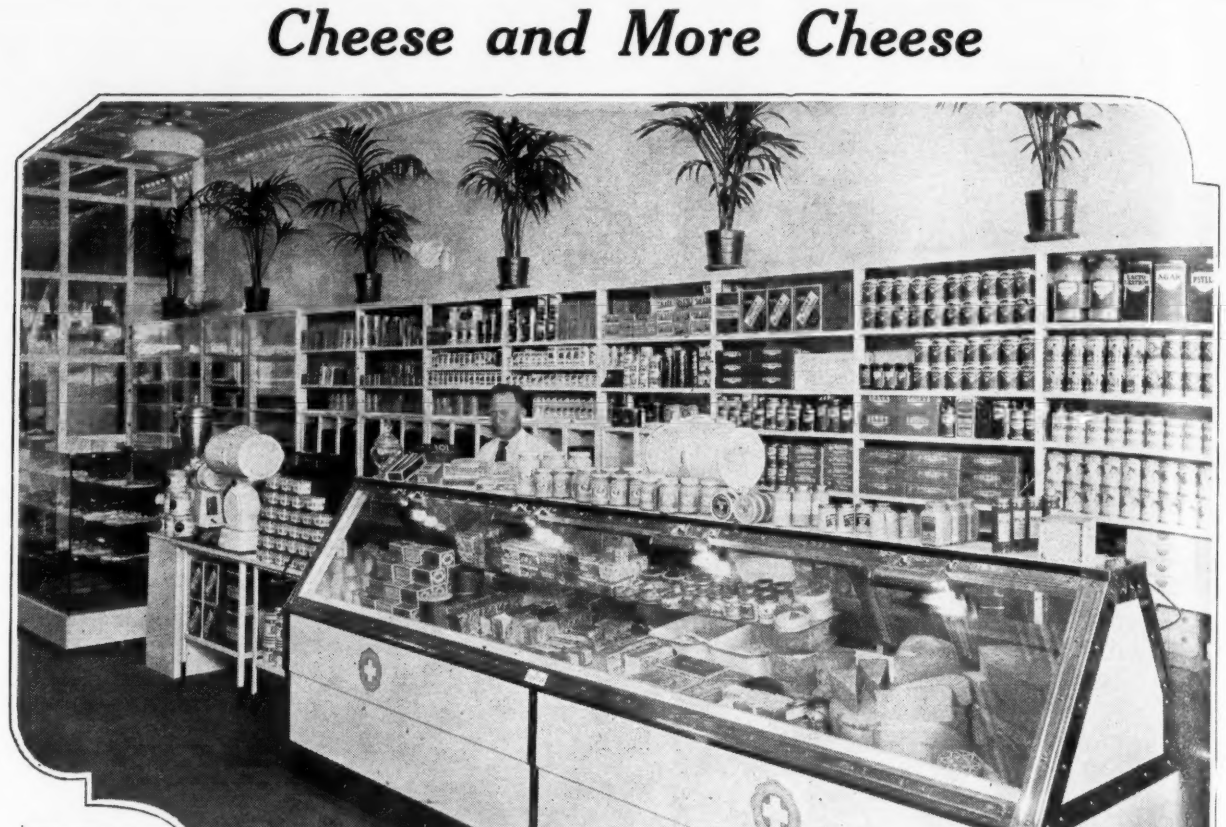
# Cheese and More Cheese



More than 150 varieties of cheese are stored in this display case.

**Grand Rapids, Mich.**—Crandall's is known as "The Most Beautiful Food Shop In Michigan." This store was opened a short time ago and its modern equipment is attracting much attention.

In the meat department the Hussmann meat refrigerator is located in the basement, thus saving much valuable space in the sales department. The Hussmann case for fish and meats has illumination on the outside. The reserve supplies come up from the basement as wanted on an automatic dumb waiter.

Under the shelving in front of the cases near the floor there is an endless belt conveyor, running around the store. Clerks do no wrapping, or making change as all purchases are conveyed to bundle clerk who does the entire job at one time.

Another Hussmann case is shown here in Crandall cheese and dairy products department. Iced milk is kept in large quantities in the storage base. Outside illumination does not heat the interior. Over 150 varieties of cheese and packages of cheese both foreign and domestic are in stock at all times. This market also uses electric refrigeration in the bakery for many purposes and in the big delicatessen department for serving cold foods, cold drinks and keeping salads, vegetables and other foods in perfect condition. As complete cooked meals are served refrigeration here is on a scientific basis.

# You can't dodge the QUICK FREEZE QUESTION

***And you can't escape the fact that corkboard is the most efficient insulation for commercial refrigerators . . .***

YOU hear it on all sides: Frozen foods are here to stay—*but* it's up to the refrigeration industry to produce a retail display case that will meet the new conditions. What are you doing to answer these questions?

How can, constant low temperatures be maintained under retail store conditions? How can condensation be prevented? How much insulation is needed?

***Years of experience***

Armstrong engineers are studying these and many other questions. More than a quarter of a century's experience in the cold storage field, designing low temperature equipment, qualifies them to speak with authority. They have cooperated in the design and construction of every kind of refrigerator.

Now the services of these engineers are offered you through the Frozen Foods Development Committee of the Armstrong Cork & Insulation Company. No matter what refrigeration problems you are facing, Armstrong can help you. The facilities of Armstrong's research and engineering departments are at your disposal. Of course there is no obligation in such a consultation. A request will bring you further information. Address Armstrong Cork & Insulation Company, 917 Concord Street, Lancaster, Pennsylvania.

*Armstrong's* (A) *Product*

# Armstrong's Corkboard Insulation

**The Standard Insulation for All Refrigeration**


## DRY-KOLD

THE "Dry-Kold" Refrigerator Co., Niles, Mich., is offering a display and storage refrigerator for handling quick-frozen meats. The latest model which is available in three sizes is heavily constructed to maintain sub-freezing temperatures in display and storage compartments. This model, known as the FC, is made in 6, 8 and 10-foot lengths.

Walls are six inches thick, insulated with corkboard and sealed airtight. Front, top and ends are of white porcelain enameled steel exterior, with Monel metal trim. The rear of the case is constructed of solid oak and all door jambs are of frost-proof, vulcanized fibre. Anti-freeze gaskets are used around all door openings. Display and storage compartments are cut off by insulation and galvanized iron sliding drawers fit into the storage section.

Four courses of plate glass set airtight make up the display front of the case. Nickel lighting fixtures are arranged on the outside. Access to the case is made through four doors in the rear, two leading to the display and two to the storage. All three sizes of the new "Dry Kold" case are arranged for coils at the top in both the display and storage compartments.

## SWIFT TURNS ACTIVITY TO RESORT CENTERS

**North Adams, Mass.**—The first start in popularizing quick-frozen meats in the summer resort centers of the Berkshire Hills has been made by Swift & Co. here in building a special refrigeration room, 22 by 14 feet, where the Swift identifiable cuts are to be kept at zero temperature. Some 18 or 20 dealers are being served with the products and the demand is mainly for pork and lamb chops, beef and lamb roasts and steaks. Robert Pope, branch manager, expects the trade in this line will show a good growth, provided the retailers do their part to put the campaign over.

## FRIGIDAIRE COMPLETES HOSPITAL INSTALLATION

**Springfield, Mass.**—Wesson Memorial Hospital has completed extensive Frigidaire installations and now has electric refrigeration for all departments. Three model C and one model N water-cooled compressor were placed in the sub-basement, each to do its particular line of work. One serves a large walk-in refrigerator, where meats are kept; another is employed for cooling milk and other supplies, a third operates for the diet kitchens, and the fourth is used for bulk ice-making.

A kitchen cabinet, model AP-35, in the basement, provides refrigeration for various foods, vaccines and materials used for the diet formulas, and alongside is a smaller cabinet containing facilities for making ice cubes, up to 60 pounds at a time, to serve the patients and also the large hospital cafeteria. These are served by the same compressor. Three D-7-2, a D-9 and a D-12 cabinet are employed for the diet kitchens on the various floors. The walk-in refrigerator is equipped with three 63-F coils.

## NEW ICE CREAM SERVICE VERY POPULAR

**Detroit, Mich.**—The suggestion to add ice cream to the menu during the hot summer season is being made to housewives of Detroit by Fred Sanders. To encourage families owning electric refrigerators to consume more of the frozen delicacy, Mr. Sanders has inaugurated the Ice-Tray package. The Ice-Tray packaged as is obvious by its cognomen fits into a tray in the cooling unit.

A neat broadside is used to carry this message into thousands of homes in the Detroit territory. It is sent by mail to the housewife and its color scheme is designed to make a definite appeal to her.

As an added feature, Mr. Sanders offers Dri-Kold service for keeping ice cream firm while being delivered to the home. The Ice Tray package is placed in a cardboard carton and a little block of solid carbon dioxide keeps the contents cool. This service is available at an extra charge of fifteen cents.

Sanders stores are popular spots in Detroit, especially during the warm summer months. Ten branch stores are operated in various sections of the Detroit territory to take care of the large patronage.

## MILK PRODUCERS FAVOR ELECTRIC COOLING

**Worcester, Mass.**—Milk producers of central Massachusetts are showing appreciation of the advantages of electrical refrigeration in cooling their product. M. C. Knight, local representative of Springfield Kelvinator Sales, Inc., reports the following sales: to W. E. Brooks, of Upton, a Kelvinator 1 h. p. condensing unit for cooling 500 quarts of milk; to Arthur Kroll, of Whitinsville, and James Murphy, of Milford, a ¾ h. p. unit each for cooling 300 quarts, and to Timothy Cronin, of Framingham, a ½ h. p. unit for cooling 160 quarts. Esco-Kelvinator outfits for cooling milk have been sold to W. E. Savage and the Woodruff Farm in Lunenburg.

# INADEQUATE

### Equipment Delays Development of Quick-Frozen Foods in the South

**Shreveport, La.**—Recent investigations into conditions in North Louisiana, East Texas and South Arkansas in regard to the possibilities of distribution of quick-frozen foods have revealed two prime factors impeding the development of this line.

The first factor is the absence of adequate refrigeration equipment to handle frozen foods on a scale that would justify packers and distributors endeavoring to distribute this line extensively. Practically without exception it has been found that the equipment available is only such as would care for a few days supply. Up to this time, consequently, handling of frozen foods has been limited to small grocers requiring a few pounds, and institutions which rapidly consume the supplies on hand. Officials of refrigeration concerns assert that interest is increasing in the possibilities of handling frozen foods, but the full development is expected to be rather slow.

The second factor in retarding the development of this work is the hostility of meat cutters, which is reported to be generally prevalent throughout the country. Actual data on this point is hard to obtain, and this objection may have been magnified.

That the idea is sound but that development is certain to come, even though slowly, is the opinion of packers' representatives who have given considerable attention to the matter in recent months. So far the distribution has been limited to delicacies for quick sale.

An indication of the quickening interest is seen in the fact that displays of frozen foods have occasionally been arranged for the benefit of various gatherings or fetes. On the occasion of the formal opening of a hotel in an East Texas town the Frigidaire dealer arranged a display for the benefit of visitors, obtaining the items through the plant of Swift & Company at Shreveport.

Local officials of the A. G. Riddick Company, distributors of General Electric equipment, also arranged a display at a recent gathering, using one of the large commercial boxes for the purpose.

At all of these displays those who came asked many questions about quick-frozen foods and there was every indication that the general public is interested. The purchase of adequate equipment undoubtedly would speed up the development of the entire frozen food industry in the South.

A campaign of education is needed. The interest exists, but it will not last forever unless something is done to stimulate and satisfy it.

## FLAX-LI-NUM USED FOR NEW REFRIGERATOR CARS

**St. Paul, Minn.**—An order calling for 1,225,000 square feet of insulating material has been placed with the Flax-li-num Insulating Company of this city by the Pacific Fruit Express Company. Shipments were begun recently from St. Paul to Roseville, California, where the Flax-li-num will be used for insulating new refrigerator cars now under construction.

Announcement was made recently that the Flax-li-num Insulating Company has been acquired by F. H. Peavey & Company, one of the largest grain marketing organizations in the United States. New officers are J. B. Gilfillan, president; H. B. Harden, general manager and sales director, and Frank Evans, secretary-treasurer.

The Flax-li-num Insulating Company, founded 20 years ago, was a pioneer in refrigerator car insulation. Flax-li-num is a semi-rigid material manufactured from the long, tough fibres of the flax plant. It is adapted to the "two-air-space" method of application recommended by architects and heating engineers.

## GAS RANGE GIVEN FREE WITH ELECTROLUX

**Kansas City, Mo.**—"Free for one week only, this Vulcan Gas Range with the purchase of a new Electrolux gas refrigerator. A small payment down—two years to pay the balance."

This advertisement, running in Kansas City newspapers, drew big crowds to the display rooms of the Kansas City Gas Co. during the June week when the range deal was the order of the day.

# TEMPRITE

### Used with Servel Machines

**Detroit, Mich.**—After a series of tests including a multiple installation of Temprite units in the factory at Evansville, Indiana, Servel distributors are now authorized to use this equipment with Servel commercial machines.

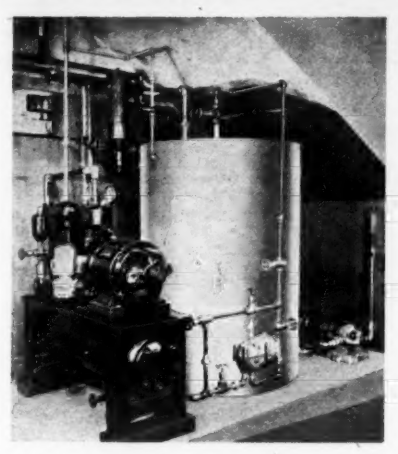
Servel's wide range of compressor sizes makes it possible for Temprites to be used in any liquid cooling application. Servel distributors are finding opportunities to specify Temprite-Servel equipment and orders are now being received by the Liquid Cooler Corp. from them.

This co-operative arrangement between two of the best known manufacturers in the refrigeration field will make it possible for the public to obtain a combination of equipment backed by the makers which has not hitherto been available.

Both organizations are justly jealous of their reputation and the new combination of units is certain of strong backing from both Servel and Liquid Cooler. The sales forces of both companies are enthusiastic over the new setup, with its increased sales opportunities.


**DRINKING WATER SYSTEMS**

*The* FRICK *Way*



**The Drinking Water system illustrated is especially adapted to office, bank and public buildings. Hospitals and industrial plants are also large users.**

**Refrigeration for this system is provided by a No. 1½ Unit and a pressure tank, with float control, all of which occupies a small space.**

***Frick Drinking Water System installed in Frick Company's home office***

***Write for Bulletin and Estimates***

Frick Company
WAYNESBORO, PA., U.S.A.
ICE MACHINERY SUPERIOR SINCE 1875


# *Housewives Throng Brooklyn Refrigeration Fair*

**Brooklyn, N. Y.**—A daily attendance of about 1,000 persons was recorded at the General Electric refrigerator exhibit at the Homemakers' Refrigeration Fair, held under the auspices of the Brooklyn Edison Company at their showroom, 380 Pearl Street. On the first afternoon of the five-day fair, Miss Florence Freer, director of the home economics bureau of the Brooklyn Edison Company, was in charge of the program. On Thursday, known as General Electric afternoon, Miss Lois Fitter, home economics division of Rex Cole, Inc., metropolitan distributors for General Electric refrigerators, talked on "Sandwiches and Drinks for Spring and Summer."

Six General Electric domestic refrigerators were shown and one DB-1 bottle water cooler. A new type commercial refrigerator created much interest.

Miss Freer stated that the trend toward increasing use of refrigerator receptacles is shown in the many questions concerning their advantages that housewives put to Home Economics workers. Miss Freer was emphatic in her approval both of vegetable pans and refrigerator dishes. In corroboration of Miss Freer's remarks, the booths which displayed refrigerator ware were thronged and nests of delicate colored refrigerator pottery vied in popular favor with the more utilitarian rectangular glass dishes. All these accessories proved extremely popular.

"The actual sales made on the floor of the showroom during the fair," said Miss Freer, "represent a small fraction of the sales that will, sooner or later, result from it. The average homemaker seldom purchases on first sight; she rather prefers to discuss merits and demerits with her family and her friends."

Swift's products on display.


# Display-Storage in a New Case by McCray

**Designed to meet a real need, this new McCray model No. 3210 takes care of requirements in food stores where limited room demands the greatest use of floor space . . . one piece display front of three courses plate glass . . . ample display shelf space . . . and generous space below for storage of reserve stocks.**

## 40 Years' Experience Back of This New Case

**Embodied in the new No. 3210 is the well known McCray standard of construction . . . quality in every hidden detail . . . workmanship the result of 40 years' experience in fine refrigerator building. Consider well the value of such experience when selecting equipment for use with mechanical refrigeration of any type. Dealers in mechanical refrigeration are invited to write for information and catalogs of the McCray line — refrigerators for every commercial purpose. McCray Refrigerator Sales Corporation, Dept. 66. Kendallville, Ind. Salesrooms in All Principal Cities. See Telephone Directory.**

ALL McCRAY MODELS MAY BE USED WITH MECHANICAL REFRIGERATION OF ANY TYPE

McCRAY Refrigerators

WORLD'S LARGEST MANUFACTURER OF REFRIGERATORS FOR ALL PURPOSES

REFRIGERATED FOOD SECTION

# ELECTRIC REFRIGERATION NEWS

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F. M. COCKRELL, *Publisher*

WILLIAM JABINE, *Editor* — FREDERICK W. BRACK, *Advertising Mgr.*
JOHN DRITTLER, *Managing Editor* — GEORGE N. CONGDON, *Business Manager*
GEORGE F. TAUBENECK, *Assistant Editor*

Eastern Manager: H. A. DeLashmutt, 1950 Graybar Bldg., New York, N. Y. Phone Lexington 9113
Chicago Representative: F. W. Henkel, 306 S. Wabash Ave., Phone Wabash 6668

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## Bugaboos

A few short months ago the producers and prospective producers of quick-frozen foods were unwillingly entertaining two great fears. First, they feared that the old and widespread prejudice against so-called "cold storage" products would work against them. Second, they were afraid that the retail meat dealers would wage active warfare against the new packaged and frozen meats.

The Springfield sales campaign conducted by the General Foods Corporation has gone a long way toward removing the first of these fears. Even in a conservative New England community like Springfield, the "cold storage" prejudice has carried little weight, and the staff in charge of the distribution of the Birdseye products has been agreeably surprised by the failure of this particular bugaboo to retard sales.

In other parts of the country where frozen products have been sold, the result has been much the same. The general public seems to have forgotten its old prejudice.

What of the second fear? Will that turn out as groundless as the first is proving itself to be? There are many indications that it will. Nearly everyone seems to have taken it for granted that because the butchers, or retail meat dealers have, theoretically at least, owed their existence to their ability to cut meats properly, they would one and all rise up in arms against any new system that would deprive them of that part of their job.

But is that necessarily so? The modern retail meat dealer, who is conducting a successful business, found out long ago that being a good merchant was far more important than being a good meat cutter. And the good merchant can sell quick-frozen or fresh packaged meats as well and probably better than he can sell his present products. Under the new system he will have on his side the unquestioned public liking for packaged goods, the same factor that drove the open cracker barrel out of the grocery store years ago. He will have to help him the fact that the goods he sells will be guaranteed as to source and quality by the producer, something that is not the case at present. He will have a stock that can be kept indefinitely without fear of spoilage, if he is not fortunate to sell it as soon as he expected to.

Those are some of the advantages. What are the disadvantages? It is doubtless true that many men now employed as meat cutters and who do nothing else will have to find other jobs. On the other hand many of these, men who now think in all honesty that their skill as meat cutters is their sole stock in trade, will be surprised and delighted to discover that they have been holding down their jobs, not because they could cut meat, but because they are good across-the-counter salesmen. If they have registered with the women and men whom they have faced in their daily work, they will find themselves well able to sell packaged meats. A good, personable salesman, with a clientele that asks for him, always is in demand.

It is also true that the handling of frozen meats will demand additional equipment. But what progressive step in the last few years has not? Does the butcher shop of today look much like the butcher shop of a dozen years ago? The wide-awake meat dealer, and there are thousands of them in this country, always has been ready to adopt improvements when convinced of their value.

What has been said thus far is mainly theoretical. What are the facts at present? So far as they can be determined they seem to be that the average meat retailer is in a receptive mood, but quite naturally wants the men back of the new products to prove to him he can make money by handling their goods. Here and there, as in Minneapolis, the backward element have sought to control the situation, and it is interesting to note that right in Minneapolis the National Association of Retail Meat Dealers is to hold its annual convention in a few days, and as part of its program will discuss quick-frozen foods. A free and frank discussion of both sides of the question is promised. Among the speakers will be a Government expert who can be depended upon not to take sides.

It begins to look as though the fancied opposition of the butchers might prove only another bugaboo, that can be disposed of by a fair amount of intelligent publicity from the men who have put time and money into the promotion of quick-frozen and fresh packaged meats.

# Hot Weather Foods Popular

**Detroit, Mich.**—Heat-harassed housewives here happily have discovered healthful, helpful new ways and means of holding hot-headed husbands.

Promptly at 2 o'clock each Tuesday and Thursday afternoon a cooking class assembles at the Electrical Exhibit in the Michigan Theatre Building. There, in increasingly large numbers, go Detroit women who (and what homemaker isn't?) are perpetually perplexed by the problem of putting variety into their daily menus.

During June and July these cooking classes have been devoted to hot-weather foods. Electric refrigerators (General Electrics, Kelvinators, Frigidaires, and Copelands) have been centers of attraction.

"Kelvinator Day" came June 3, the first class of the month. The following Friday morning many of the 74 guests at the Tuesday class returned for individual instruction on the use of the Kelvinator and other electric refrigerators.

Intervening were classes devoted to "Cooking the Sunday Dinner on Saturday," "Preparing the Picnic Basket," "Healthful Hot Weather Meals," and "Electric Canning" before Frigidaire's turn came. Frigidaire gave an afternoon tea at which eighty-eight were present.

More individual instruction on the use of the electrical refrigerator, with emphasis on the Frigidaire, followed Friday, the 20th.

Miss Marguerite DeCremer, who does educational work for the Knox Gelatine Co., demonstrated "What Can Be Done with Gelatine via the Electric Refrigerator," Tuesday, June 24. To the 56 heat-frazzled guests that day Miss DeCremer served strawberry sponge, pineapple souffle, and Knox strawberry pie, all made right before their eyes in a Frigidaire.

General Electric refrigeration had its day Thursday, June 26, when 58 guests watched the preparation of jelly muffins, shrimp delight, raspberry sherbet, and General Electric punch. Samples of this cold cooking were passed out to everyone present.

Among the refrigerated cooking lessons on the July program were "Cold Cooking for Hot Days," "Entertaining without a Maid," "Summer Desserts," "Kelvinator Day" (July 24), and "Ginger Ale Surprises via the Copeland Refrigerator" (July 31).

A grand total of 1,186 persons attended the bi-weekly classes in June. In true hostess fashion, Mrs. J. P. Meek, who is in direct charge of the Electrical Exhibit, greets all guests, keeps the machinery of the classes like the refrigerators, running noiselessly, and lends a smiling dignity to all occasions.

The Electrical Exhibit is a co-operative enterprise which exists solely for the display and demonstration of electrical appliances. Nothing is sold at the exhibit.

## SALADS

### Dominate Summer Menus

KELVINATOR's home service department is quite busy on these torrid days preparing appetizing salads and other cold dishes for Kelvinator users. All recipes are tested thoroughly in the Kelvin Kitchen before they are accorded wide distribution. Distributors find homemakers are interested in the comparatively easy methods of concocting delightful dishes for the summer menu.

**Frozen Peanut Butter Salad**

9 ozs. cream cheese
½ cup chopped green peppers
½ cup chopped pimiento
⅓ cup peanut butter
½ cup chopped celery
½ teaspoon paprika
½ teaspoon salt
1 tablespoon lemon juice
¼ cup mayonnaise
¼ cup heavy cream

Cream the cheese with a fork, then add other ingredients in the order given. Last, fold in the cream which has been whipped. Freeze in Kelvinator tray 2 to 3 hours.

**Frozen Pear Salad**

½ cup pears
½ cup peaches
½ cup preserved figs
½ cup shredded pineapple
¼ cup blanched shredded almonds
1 cup mayonnaise
1 cup heavy cream

Drain fruit and cut in small pieces. Whip cream and blend with mayonnaise. Combine all ingredients and freeze in Kelvinator tray. Fills one 27-cube tray, freezes in 2 to 3 hours. Cut in squares and serve on bed of lettuce with mayonnaise.

**Mayonnaise Dressing**

2 egg yolks
½ teaspoon sugar
2 tablespoons lemon juice
1 teaspoon salt
1 pint salad oil

Add all dry ingredients to the egg yolks and mix well. Add the oil gradually, at first a few drops at a time, later by the teaspoonful, and so on until the whole pint has been used. Add the lemon juice during the mixing of the dressing, as the mixture needs thinning. Store in covered jar on top shelf of Kelvinator.

**French Dressing**

6 tablespoons vinegar
3 tablespoons salad oil
Salt, pepper and paprika to taste

Shake up well in bottle or crust. May be stored on top shelf of Kelvinator.

**Five O'Clock Punch**

¼ cup grape juice
¼ cup grape fruit juice
½ cup ginger ale
¼ cup foundation punch
Ice cubes

Combine all ingredients and serve in tall iced tea glasses.

**Condensed Milk Dressing**

2 teaspoons mustard
½ teaspoon paprika
1 cup condensed milk
½ cup vinegar
1½ teaspoon salt
2 eggs
⅓ cup melted butter

Put everything in a large bowl. Beat thoroughly with egg beater until thick. Pour in two pint jars and cover. Store in Kelvinator until needed. May be thinned with cream, if desired, when serving.

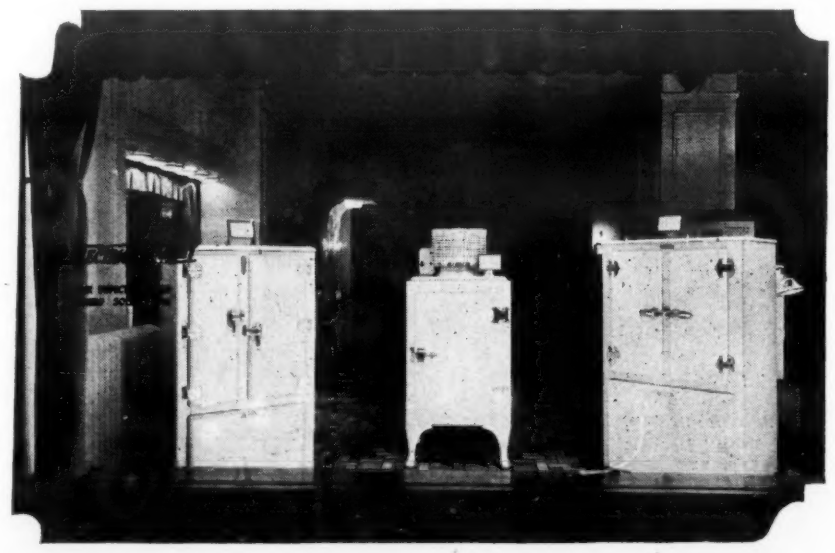
## GLUECK BUSY WITH LARGE COMMERCIAL JOBS

**Kansas City, Mo.**—Glueck & Company recently installed a C-450 G. E. commercial refrigerator in the restaurant of the Hyde Park Hotel here for Miss Harriet Baily. Myers Barbecue recently had Glueck & Company put in a C-450 in the refreshment place at Swope Park.

A third G. E. unit has been placed in the University Club here. Glueck & Co. replaced an old walk-in with a special Dunning cabinet of 130 cubic feet capacity.

## FOOD SHOW INTERESTS DES MOINES HOMEMAKERS

**Des Moines, Iowa**—The local branch of the Frigidaire Corporation held a food show here the week of July 27 to August 2 at the Paramount Theater. The exhibition was held in the main lobby of the theater and included demonstrations of various kinds. As a climax to the week's show a new Frigidaire will be given away on Saturday.



A famous trio on display.

Kelvinator, G. E. and Frigidaire.

# DESERTS RADIO

## For Work in Refrigeration

**Philadelphia, Pa.**—Miss Gertrude P. Janssen, for some time a prominent Philadelphia radio artist, has been appointed director of the Home Economics Department of the Kelvinator-Philadelphia Branch, now under the management of former district manager Fred J. Foersterling.

Miss Janssen is the possessor of a soprano voice and, until assuming her new position, was on the staff of Radio

**Miss Gertrude P. Janssen**

Station WELK. She was known as Philadelphia's "Sweetheart of the Air."

Miss Janssen is combining with her activities as manager of the Philadelphia Branch home economics department a wider sphere of work. She is using her sales experience and ability in close contact with prospects for Kelvinator and with Kelvinator users. She lectures and instructs them in the culinary art. Her idea is to make the Home Economics Department function as a real factor in the making of new sales and in the "keeping sold" of those who already have purchased Kelvinators.

# CHICKENS

CHICKEN salad is always popular. But the hostess who makes a chicken salad that her friends have named "Chicken Salad Supreme" is justly proud of its reputation.

One of the secrets of this famous salad is roasting the fowl first instead of stewing it. Roasted chicken has a more pleasing flavor than stewed chicken, and it is surprising how much difference this change in the preparation of the meat makes in the flavor of the finished salad. When chicken is cooked in water, most of the flavor and much of the food material goes into the broth. The result is excellent chicken broth but less tasteful meat for salad. If broth is desired, it may be made by stewing the neck, wings and feet with the bones after the meat has been removed for the salad.

As is true in all salad making, it is advisable not to chop or grind the ingredients too fine. Moderately coarse pieces make a more attractive salad. Cutting the chicken with scissors gives excellent results. The following proportions make a chicken salad that is most delicious. When it is served with bread and butter sandwiches and iced tea or a fruit beverage, it makes a delightful summer luncheon. This amount makes six half-cup servings.

**Chicken Salad Supreme**

- 2 cups minced chicken
- 2 tablespoons chopped stuffed olives
- 2 tablespoons chopped sweet-sour pickles
- ¼ cup chopped blanched almonds or English walnuts
- 1 chopped hard-cooked egg
- ½ cup mayonnaise or whipped cream dressing
- Lettuce, watercress or Chinese cabbage.

# AND EGGS

CRISP, cool, colorful, yet delightfully easy to prepare are summer dishes made with eggs. For the noon hour, the wise homemaker plans an egg salad that provides the necessary nourishment for her family without adding heat-producing foods. For the informal supper on the veranda or in the garden she selects an egg dish that might, for want of a better name, be called a glorified sandwich. For the afternoon tea, dainty canapes tempt summer appetites.

One of the best things about egg dishes is the fact that they require no bothersome marketing or elaborate planning. Always there are eggs in the refrigerator. They can be cooked while breakfast is being prepared and put back into the refrigerator to chill. A few minutes before mealtime the cook arranges the cooled eggs, adds a bit of seasoning, a dash of dressing, and the dish is ready to serve.

But a word of warning: when cooking eggs to be used in "hard-cooked" dishes, try cooking them for 20 to 30 minutes below the boiling temperature. This can easily be done by putting the eggs into boiling water and then setting the kettle, covered, in a place where the water will keep hot without boiling. This method keeps the egg white tender and the yolk mealy and smooth. If the eggs are plunged into cold water as soon as they are removed from the hot water, no dark ring will form around the yolk.

Here are two salads that are not only good to look at and good to taste, but they add important food nutrients to the meal. Devilled Egg Salad is especially desirable as a luncheon dish, while the Jellied Egg Salad adds interest to any summer dinner or afternoon bridge.

**Devilled Egg Salad**

- 6 hard-cooked eggs
- 2 tablespoons grated cheese
- Pinch of salt
- Pepper to taste
- 1 tablespoon cream
- ¼ cup mayonnaise
- Endive or watercress

Remove yolk from eggs and mash. Add cream, grated cheese, 1 tablespoon mayonnaise, and beat until fluffy. Arrange 3 egg halves on bed of curly endive so that points of eggs are in. With pastry tube fill yolk mixture back into whites. Garnish with pickled midget onions and radish roses.

**Jellied Egg Salad**

- 4 hard-cooked eggs
- 1 cucumber
- 1 tablespoon gelatin
- 1½ cup tomatc juice
- 1 teaspoon minced onion
- 1 clove
- ¼ teaspoon salt
- 4 green peppers
- ¼ cup cold water
- 1 tablespoon vinegar
- 1 bay leaf
- 1 teaspoonful sugar

Soak gelatin in cold water for 5 minutes. Boil tomato juice, onion, vinegar, spices, sugar and salt. Strain. Add gelatin. Stir until dissolved. When cool, pour into green peppers which have been cleaned. When the gelatin begins to set, place into each pepper a hard-cooked egg. The egg may be held upright in the jelly by means of a toothpick. When the gelatin is thoroughly set, cut ¼ inch slices across each pepper. Alternate these slices with slices of cucumber on a bed of cress or lettuce. Garnish with mayonnaise and radish roses. Serves eight people.

# STAR SALESWOMAN

OFTENTIMES the feminine point of view on matters pertaining to preservation of foods is very helpful in closing the sale of a mechanical refrigerator. Mrs. D. Elizabeth Butler, who a short time ago earned a trip to Dayton, Ohio, in recognition of her Frigidaire sales activities, finds that the feminine viewpoint, mixed with hard work, produces many sales.

The housewife is always interested in the modern methods of storing perishables, and Mrs. Butler has acquired the knack of supplying the much wanted information. In her six years' experience with the Frigidaire branch at Minneapolis, she has studied the appeals which eventually culminate in the sale. Shortly after joining Frigidaire in 1925, Mrs. Butler conducted food demonstrations two evenings a week, and this experience in the early part of her career

**Mrs. D. Elizabeth Butler**

has helped materially. It enabled her to find out just what the housewife wanted to know about refrigeration.

By her sales efforts during 1929, Mrs. Butler won membership in the Frigidaire B. T. U. Club, which is composed of topnotchers selling 125 per cent of their quota. Of the hundreds who were honored by Frigidaire at Dayton and Indianapolis, only two represented the fair sex.

# FROZEN SALADS

## Make Hot Weather Bearable

**Dayton, Ohio.**—Forget about warm weather—eat frozen salads—seems to be the theme of Frigidaire Corporation home economic experts within the past few days, according to a collection of suggestions on this form of summer delicacy recently issued by that company. These suggestions are being widely distributed in the field by Frigidaire dealers, distributors and salesmen.

Frozen salads may be served as a course of a three- or four-course dinner, or may be offered as the main dish of a luncheon, supper or party.

Here is a frozen salad which is tasty and appropriate for serving in the summer months. It was developed by Frigidaire home economics experts:

**Frozen Cress Salad**

Ingredients are two cream cheese, ½ cup stuffed olives (sliced), 1 teaspoon salt, ½ cup single cream, 1 quart measure water cress, ½ cup mayonnaise, 2 cups whipping cream.

Cream cheese by adding one-half cup plain cream slowly; then add mayonnaise in the same manner. Place in refrigerator to keep cool while other ingredients are in preparation. Whip cream and return to refrigerator to keep cool. Remove crisp water cress from the hydrator and break in parts approximately one inch long, omitting coarse stalks. Fold whipped cream into cheese mixture, add olives and water cress. Pour into freezing tray and allow to freeze without stirring. Set cold control in third or fourth position for freezing, and then set it in the second position until salad is served. This salad is more desirable if not allowed to freeze too solid. Serve on crisp lettuce and garnish with half-stuffed olives. Cut olives lengthwise.

## QUINCY UTILITY EMPLOYS HOME SERVICE HEAD

**Quincy, Mass.**—Miss Marjorie Watson has been employed by the Quincy Electric Light and Power Co. as home service director. She will be stationed temporarily at the Norfolk Downs store.

Among Miss Watson's chief duties will be the demonstration of the part electric refrigeration can play in the preparation of meals to the housewives of Quincy.

Even though New England housewives are famous for their culinary skill, they like the sort of help and advice that Miss Watson is able to give them.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**YOU ARE INVITED**

to visit our installation school and factory. Learn how the SUPER *Automatic* Oil Heator is made and installed. Find out for yourself why it is such a popular and satisfactory oil burner for the home.

*Write or Wire Today*

**THE SUPER OIL HEATOR CO.**
275 Connecticut Blvd.
**Hartford, Conn.**



*There is no* SUBSTITUTE *for*

**Appearance**

*in* SUCCESSFUL MERCHANDISING

YOU must have noticed the difference between the retail store of today and the crossroads emporium of the "horse and buggy" era.

Particularly, is there a difference in appearance. The modern store gleams with cleanliness. Equipment is bright and shining...it looks clean...it is clean.

Monel Metal has made a definite contribution to this revolution in merchandising methods. Because it affords more cleanliness with less cleaning... because it always looks attractive ...it has been adopted by leading manufacturers of store equipment.

This lustrous Nickel alloy will not rust...it resists corrosion...it has no coating to chip, crack or wear off. Monel Metal is durable...rugged...sterling quality all the way through. It retains its attractive appearance through years of hard service...it is the most economical of available materials.

In ordering display cases, soda fountains, ice cream cabinets, food service equipment, store fronts or other store furnishings, specify Monel Metal as a matter of good business.

MONEL METAL
MODERN AS TOMORROW

SEND FOR "LIST B" OF MONEL METAL AND NICKEL LITERATURE

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

This advertisement featuring McCray equipment which appeared in the March 1930 issue of Chain Store Age, is typical of the way the story of Monel Metal is being told to chain executives. This constant month-after-month effort is winning wide good-will for equipment made wholly or partly of Monel Metal.

*The fascinating story of Monel Metal —its properties and uses—is told in a new 2-reel motion picture film. Write for details of free distribution.*

**We TELL *them*... *you* SELL *them*!**

National and trade advertising which links the advantages of Monel Metal with the products of enthusiastic users is keeping the story of Monel Metal constantly before chain purchasing officials. This advertising is creating good-will and a broad acceptance for all types of Monel Metal equipment including display cases, cabinets, soda fountains, slicing machines, store fronts and other fixtures.

Chain organizations with their keen understanding of consumer psychology, appreciate the importance of attractive, well-ordered store interiors. Consequently, they are responsive to this advertising and favor equipment that provides the most inviting and sanitary setting for their merchandise.

The lustrous beauty of Monel Metal is permanent. It is not dimmed by time or hard usage. Monel Metal is easily cleaned and kept clean because it is immune to rust and resists the corrosive action of both food acids and cleaning alkalis. It is nearly impervious to denting and abrasion because it has the strength and toughness of steel, with no coating to chip, crack or wear off.

MONEL METAL

Monel Metal is a technically controlled Nickel-copper alloy of high Nickel content. It is mined, smelted, refined, rolled and marketed solely by The International Nickel Company. The name "Monel Metal" is a registered trade mark.

INCO MONEL METAL

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

## RURAL SERVICE MAKES FRIENDS FOR UTILITY

**Augusta, Maine**—The Central Maine Power Co. neglects neither its p's nor its q's, nor does it forget its farm customers. Each of the company's six divisions now has a rural service man, whose duty it is to keep farmers electrically happy.

These men pay periodical calls to farm homes, make pleasant contacts with the dwellers therein, help keep the appliances owned by the farmers in good repair so that these electrical devices will be in constant use, and spread the gospel of the labor and money-saving utility of electricity.

All repair work, except for the cost of replacement parts, is done without cost to the farmer.

These rural service men are chosen for their agricultural background, and their knowledge of and sympathy for rural conditions. They never miss an opportunity to create a desire for more load-building appliances. They know how to talk refrigeration.

The men and their divisions: Edward Elliot, eastern; Glen C. Libby, western; Joseph Morton, central; W. E. Patterson, lower northern; J. Leland, Jr., upper northern, and R. W. Morse, southern.


*Thesco Refrigerator Display Counter No. 2900*

QUALITY THESCO SINCE 1870

**Gaining Market Popularity**

Its splendid adaptability for the display and storage of packaged, ready-cut meats, coupled with its inherent qualities of perfect refrigeration and showmanship, has earned for the Thesco Refrigerator Display counter, shown above, an envious popularity with the trade. Write for fully descriptive literature.

DISTRIBUTORS: A few fertile territories are open to Thesco representation. Write for complete proposition, discounts, and profusely illustrated catalogs, describing 70 styles of Refrigerator Display Counters and other refrigerator and store equipment; and showing 106 items of interest to hotels, hospitals, and public institutions.

**THE C. SCHMIDT CO.**

JOHN AND LIVINGSTON AVENUE CINCINNATI, OHIO



**The Chief Tells the Junior Salesman**

***"Corkboard insulation prevents most refrigerator troubles"***

**"Insulation that gets damp . . . .**
**Motors that run all the time . . . .**
**Cabinets that sweat . . . .**
**Such troubles don't occur**
**where the insulation is corkboard.**

**Cork gives *permanent* insulation**
**It does not absorb moisture—**
**does not lose its insulating power.**

**Cabinets insulated with cork**
**make friends of customers.**
**They render good refrigeration**
**service year after year."**

**Novoid Corkboard Insulation**

CORK IMPORT CORPORATION 345 W. 40TH ST., NEW YORK

*"Permanent Protection for All Refrigeration"*


# Refrigeration in the Navy

## Ability to Keep Large Stores of Food in Healthful Condition Has Increased Cruising Range.

By G. K. Spencer

WITH the exception of one vessel of the Royal Navy of England, the United States ship Chicago was the first naval craft to mount chemical refrigeration. Electric refrigeration was first tested in the German Navy, but first practically applied in the Navy of the United States. The Chicago was, of course, the old cruiser Chicago, and not the modern light cruiser of that name. Yet she epitomized the top of a pyramid of scientific research and effort toward maritime refrigeration, that had been building up for fifty centuries, or from the time the Phoenicians first took ships to sea in the Mediterranean.

The agony and death, loss and destruction through the breaking of human bodies under the indomitable will of thousands of sea captains as they attempted to force their craft and their men over tropical seas, have formed countless epics, a whole fanciful world in which only the lack of "artificial" refrigeration arrested the discovery of continents and islands and withheld until later years the development at sea which the first quarter of the twentieth century has seen.

Scurvy, itself, that dread disease which wiped out whole fleets and disrupted the plans of conquest of hundreds of emperors and potentates, and more than once changed the face of the world, as expeditions melted at sea like wax before a flame, existed and persisted only because of the lack of refrigeration.

Sea captains like Captain John Cook, of the Royal Navy, and like Magellan, actually forced their men to wallow ashore on strange uncharted islands and grovel in the grass, eating it. Scurvy had to be conquered. And captains searched the substances of the world to conquer it. Substances were found that could delay its appearance, but none that could positively cure it, or prevent it from making its appearance during a long voyage at sea.

Except for mutinies aroused by cupidity, nine-tenths of all sea mutinies up to the beginning of the twentieth century had their origin in faulty diet and the attempts, heroic and stern, of captains to provide the deficiency in unusual methods, the best at hand.

Men had to be whipped to sea. The life was unnatural in the extreme, and the captains, for single cruises of some duration, frequently were knighted and otherwise honored. From so simple a cruise as one of a thousand miles, frequently half a ship's company would return, the rest having been heaved overboard with sad dispatch when scurvy conquered them. Even with ships moving under sail, the process of discovery and colonization that began when the Mediterranean powers pushed out into the Atlantic, might have proceeded to completion in a few years instead of centuries, if refrigeration had been available.

### Modern Refrigeration on New Emden

With the coming of refrigeration to ships at sea, it became possible to maintain hydrographic and sounding vessels long enough at sea for them to make continuous charts and records, affording information on which regular and, particularly, safe operations could be developed. In war, the refrigerator made possible the close blockade of the German coast in the Great War, and also made possible the long distance operations of the intrepid German cruisers such as the Emden, which carried chemical refrigeration. The new Emden, which has just been visiting American shores showing her flag, carries the most modern electric refrigeration both for the crew and for the wardroom.

In the United States Navy we carry that a step further, in that we supply electric refrigeration for our crews, and separate, though smaller, electric refrigerators for the Admiral's mess, for the Captain's mess, and very often separate electric refrigeration for the wardroom. In the new light cruisers, such as the Pensacola and Northampton, we may have as many as six small units of well known make. The aircraft carriers Saratoga and Lexington can accommodate and use to good purpose, more than that and, at times, there have been more aboard.

Even when Lord Nelson was blockading the French and Spanish coasts so closely that not even a pinnace could get out, during the early years of the last century, he had to have ports close at hand into which he could put for recreation and for fresh supplies, as well as a constant line of supply ships along his line of communications. Similar conditions reigned in the Union blockading forces during the American Civil War, and the few Confederate cruisers that did get out made havoc among the Union supplies.

The naval market for electric refrigeration will expand and continue to expand, for at present we are using refrigeration in behalf of human beings and their comfort at sea, but tomorrow we will be refrigerating our ammunition holds. Let us see. Every year we send ashore thousands of pounds of ammunition for drying out after they have been subjected to sea water. At sea as the thermometers on the bridge gradually rise in their readings as the heat of the sun and the ship's engines affect the steel bulkheads, we await the highest safe limit, and then, when the thermometers reach that limit, we pull the levers that flood the magazines, for above that heat limit, the powder is very apt to fulminate, explode and cause serious damage to the ship.

### Keeping the Powder Dry

Naval engineers have long worked on this problem, but it is undoubtedly a problem for refrigeration engineers. A simple matter of electric refrigeration will avoid much of the trouble of flooding magazines in the future, and the subsequent drying out of powder. It happens to be a curious fact—but nevertheless a fact—that we can dry out our powder, once it has been immersed in sea water, and use it normally. But this is a tedious and costly operation, easily forefended by adequate electric refrigeration. Electric refrigeration of powder magazines will be a feature of future war vessels.

Military vessels must more and more turn to electric refrigeration, in every department. For electrical ships, led by the Navy of the United States, are taking the lead in all the oceans of the world. Similar conditions prevail in the merchant navy which, following naval practice, has adopted electric refrigeration as a definite standard. Yet the greater portion of the equipment being purchased must, perforce, be originally designed for land use. What both the Navy and the merchant navy require is specifically-designed marine refrigeration.

Many naval officers interested in refrigeration, believe that electric refrigeration will show a vast industrial expansion along the lines above indicated. In fact, there is scarcely any limit to applications of electric refrigeration. Owing to the fact that the Navy's electrical power is made by burning fuel oil, it is necessary to design naval equipment on a most economical power consumption basis, for it will be possible to place both in the Navy and in the thousands of ships of the merchant navy millions of dollars worth of electric refrigeration equipment just as soon as vessels can use this equipment without too great drain on their available fuel oil supplies.

There have been innumerable times in naval destroyers when the ice-making and refrigerating machinery has had to be cut out because of the necessity of having fuel under various delicate conditions when the ships have been far from an oil supply and with thousands of miles still to cruise ahead of them. This problem is now being solved by refrigeration engineers, but further improvements along the same line will be necessary for the future.

With chemical refrigeration, the Navy got along fairly well, through an extended system of instruction of personnel. With electric refrigeration, practically fool-proof and troubleless, breakdowns, if they do occur (there have been none to date in the millions of dollars worth of equipment placed in naval vessels) can be handled by factory representatives in or near Navy yards.

### Carrying the Message

It is also interesting to observe that American electric refrigeration equipment in naval ships, has served to aid our export market mightily. Some manufacturers, knowing naval vessels would be touching at certain overseas ports, have been able to have their equipment actually inspected in operation aboard naval ships, by prospects with whom they had been corresponding. The first American equipment sold in Chile, Peru and the Argentine was put over largely as a result of this Navy co-operation. The China ports are also using American equipment extensively, but the purchasers saw it in operation first in our naval vessels. Recently a squadron of three light cruisers, carrying electric refrigeration, was inspected with vast interest at the ports of Shanghai and Hong Kong, by Chinese and British, too, who later placed orders in this country for very similar equipment. In this case, trade certainly did "follow the Flag."

Today, our fleets can remain at sea for months, four months being a sinecure, without discomfort. The olden ships did remain at sea for almost as long periods, but they were reduced to the utmost distress to do it, and no fighting ship that long at sea, a hundred or even fifty years ago, would have been much of an antagonist in battle. Today's forces at sea can fight a first-class sea action after five months at sea, in an extremity. It is not desirable but it can be done.

The refrigerator, and particularly electric refrigeration, have helped to render this possible. The fleet has become truly a "city at sea."

While all the refrigeration problems of the land are likewise common at sea, the Navy and the merchant navy, too, have several advantages over the average shore plant, in that they have a constant supply of very excellent brine for cooling purposes from the sea itself. Apart from the actual manufacture of ice, the whole cooling system may be, and often is, operated by pumping sea water through the piping provided for that purpose. The refrigeration engineer commissioned to design refrigeration facilities for seagoing vessels takes cognizance of this special condition.

The fact is, modern naval strategy is directly dependent on refrigeration, and, under present power conditions, on electric refrigeration. The Navy of the United States offers the greatest problem and study along this line, in the world, because the peculiar situation of the United States, with vast oceans on both sides, makes it necessary for our forces to do exceedingly long cruises in order to come into any strategical area in which we might be interested in conducting operations of a naval character.

The distance to Hawaii from the mainland is about 2,100 miles. From

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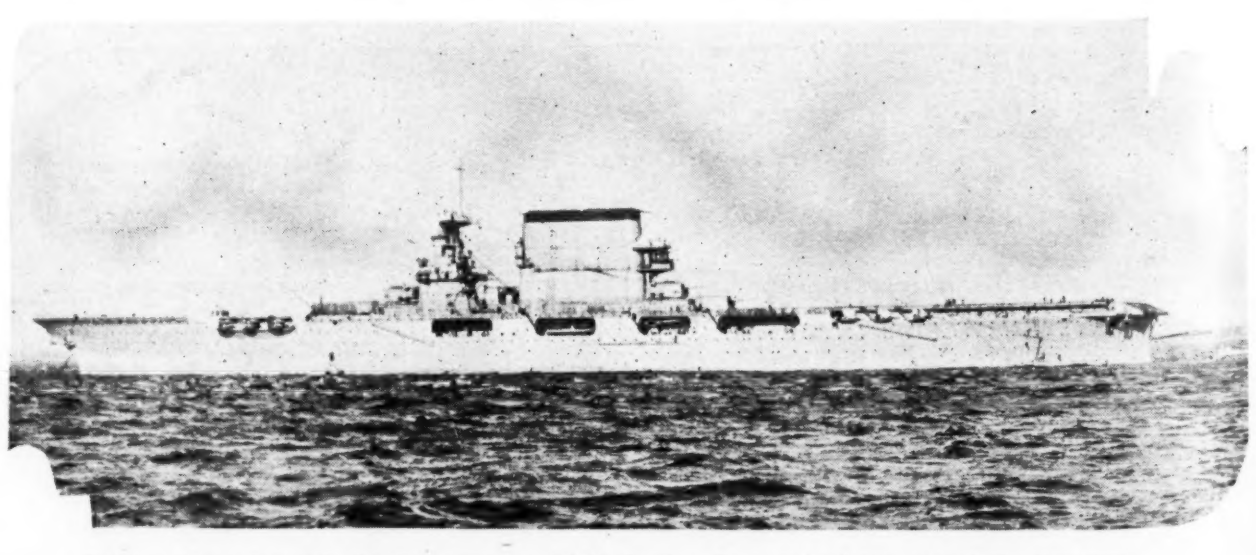
## *U. S. Ship Saratoga—Airplane Carrier*



**Refrigeration safeguards the food served to Uncle Sam's sailors and aviators aboard the Saratoga.**

# NAVAL

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Hawaii to the Philippines is about 4,100 miles, and it is further to the China coast. The Atlantic offers a 3,000-mile jaunt. To carry war to any possible enemy in these areas will involve a cruise of at least 3,000 to 4,000 miles to the scene of operations, then a few hundreds of miles in battle and a return cruise of 3,000 to 4,000 miles in the event we are defeated. If victorious, we will still require vast refrigeration facilities, for our enemy would scarcely be kind enough to leave his shore facilities in decent working condition. Any war we conduct, any cruise we undertake outside our territorial waters, is dependent on electric refrigeration, or, under special conditions, on chemical refrigeration.

We have never had any special difficulty with the chemical plants which preceded the electrical installations. There were the usual number of technical "breakdowns" due to inexperienced hands in care of refrigerating apparatus, but, possibly, no more than were encountered among the landsmen. But, after all, the present electrical apparatus is, of course, semi-chemical.

#### Educating the Gob

The Navy, with the induction of chemical refrigeration, issued under the Bureau of Engineering, a pamphlet to all the fleet, carrying full instructions for the handling of chemical refrigerating machinery. This machinery, although put in the hands of sailors recruited in the usual manner, produced surprisingly few breakdowns, an evidence that even then, more than twelve years ago, refrigeration at sea had reached a stage where the layman could handle the machinery. And even repair it, for in the destroyers we frequently went days, while someone tinkered with the ice-making machinery, without a single morsel of fresh food. We were reduced to sea biscuit and salt meats and drinking really hot water; hot, because the tropical sun and the ship's heat combined had rendered the water tanks almost scalding. It was even worse than the sailors in sail suffered, for we had ships that heated up with the beating of their own engines. The destroyers are still that way today.

There is at present in Congress a move to build further American destroyers, refrigerated with modern American electrical refrigeration machinery, and this movement, if it goes through, will probably result in the construction of at least twelve new, modern American destroyers. Electric refrigeration will be employed in all this new construction, when appropriations are made, for the Naval Bureau of Engineering is committed to modern refrigeration measures in all new construction, and to the same kind of refrigeration in ships being overhauled.

It is interesting to observe that all the new light cruisers, destroyers, submarines, and even the Yangtse river patrol vessels, newly constructed in Chinese shipbuilding yards, are carrying electric refrigeration in the form of standard American units, regularly sold on the American market. In other words, standard American equipment has proven satisfactory for marine service. In the U.S.S. Saratoga alone there are, besides the normal ice-making machinery and refrigeration, twelve standard ice-making and refrigerating machines of standard manufacture.

#### Superiority of American Equipment

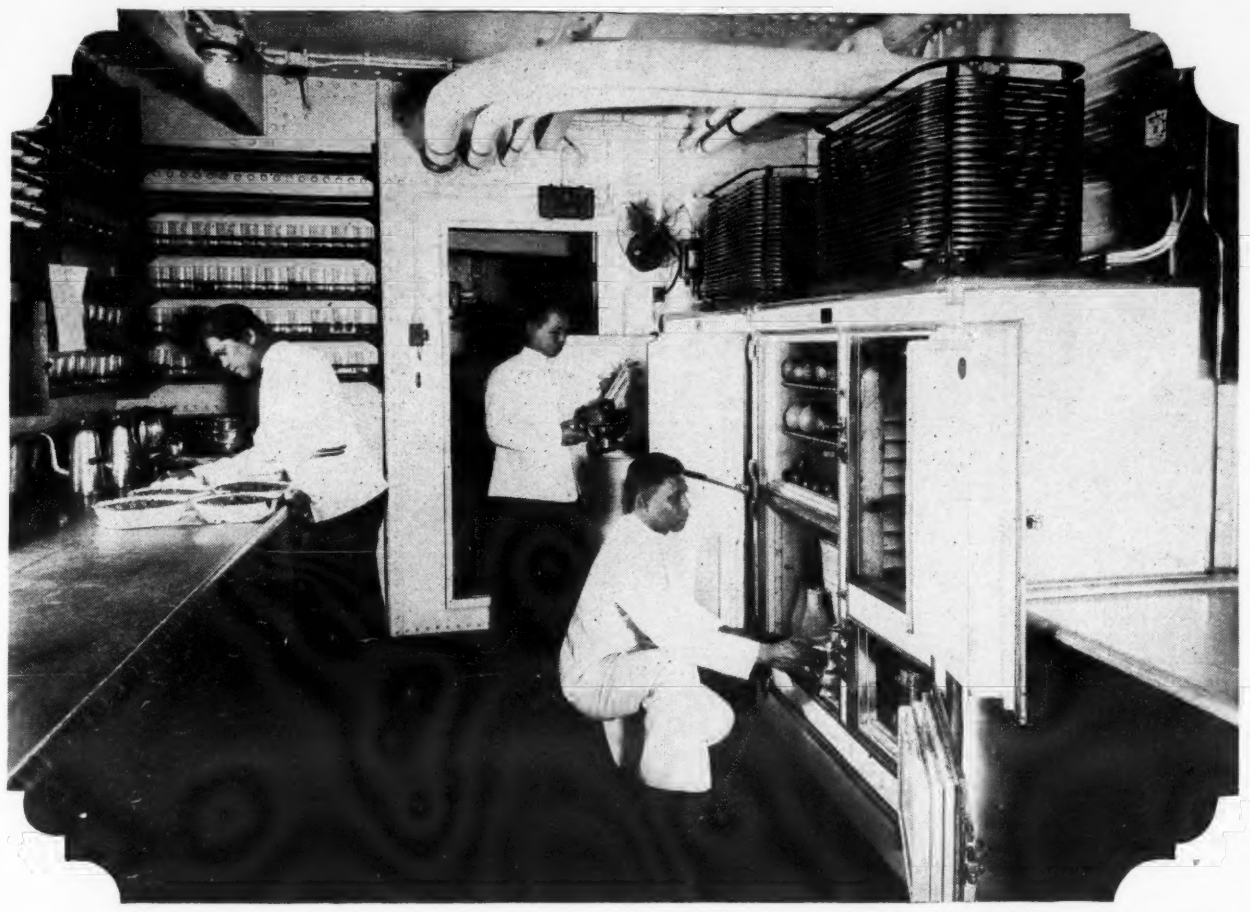
In the last twenty months, the naval ships of three great nations have confirmed the superiority of American equipment, by making purchases of American devices. This present writer has assisted the British ship Dunedin, the German light cruiser Emden (the new Emden which has been paying such brilliant visits to our ports) and the Japanese cruiser Satsuma, to purchase American electrical refrigerating units. More than this, he has assisted some sixty-one American craft to do likewise. As a result, there are electrical units in Samoa, the Philippines, the Virgin Islands, Panama and even Alaska, in naval use. The Alaskan summers are short and hot, and they require electric refrigeration.

Of the some 300 U. S. naval vessels afloat, and the sixteen-odd naval stations ashore, all are now provided with some kind of refrigeration, yet the majority of these must be equipped during the next two years, with electric refrigeration. Many of these units will receive their equipment from the Navy Department, but others will utilize ship or station funds for the purchase in local markets of electric refrigeration equipment. In some instances, the refrigeration will be procured by funds from special monies provided by crews themselves.

The foregoing prompts the writer to suggest that American manufacturers and engineers of refrigerating equipment will find a very real profit in approaching the navies of other countries, especially the British. The two Canadian naval ships are already carrying American equipment, and that speaks for itself.

There will continue to be an expanding naval market, due to the new light cruiser and aircraft carrier building program. The five light cruisers still to come on the present program will all require American equipment, and the two small aircraft carriers already authorized will likewise use American equipment.

# *Kelvinators on Watch*



Kelvinators on duty in the Junior Officers' Pantry on the mammoth airplane carrier, U. S. S. Saratoga

## FRIGIDAIRES GO TO SEA ON PLEASURE CRAFT

**Milwaukee, Wis.**—Refrigeration has an important role on board the palatial yacht, Memory III, which was recently built for Mr. and Mrs. Sherburn M. Becker, of this city. Three Frigidaire units were selected to fulfill the refrigeration requirements of this pleasure craft. The Frigidaires are on duty in various parts of the ship and provide ample refrigeration to meet the heavy demands. Refrigerated food is popular with the many guests of the Beckers. At the present time the Memory III is cruising in eastern waters.

The ship is 143 feet long, has a 23.6 foot beam and a draft of eleven feet. Powered by two Bessemer Diesel engines, it has a speed of 16 to 17 miles per hour. Its fuel capacity is about 14,000 gallons, ample for a cruising radius of 5,000 miles. A tank for fresh water holds 15,000 gallons.

## REALISTIC REPRODUCTIONS HELP SALES

DEALERS and distributors find that the use of imitation foods in the electric refrigerator creates a favorable impression on housewives when they inspect the models on display at the showroom. Clever arrangement of the imitation articles in the refrigerator gives it a pleasing atmosphere.

The Reproductions Company, 80 Boylston St., Boston, Mass., has augmented its line of artificial food for display purposes. Various assortments are now available and they include steaks, butter, chickens, vegetables and fruit. These reproductions are made of a new hard plastic art material and appear very realistic.

## CONNECTICUT BAKERY BUYS COOLING EQUIPMENT

**New Britain, Conn.**—A Hill dry-cooled walk-in box with 1 h.p. Frigidaire unit has been installed in Noffmann's Bakery, 144 Main street, by the Connecticut Light & Power Company, New Britain Frigidaire dealers.

**The Imitation Food Products Co.**

(Branch of The Artistic Production Co.)

107 Lawrence Street

Brooklyn, N. Y.

Ask for our catalog of January 1, 1930. Direct sales only. "Indispensable with refrigerator display."

## CRIPPLED YOUNGSTERS LIKE REFRIGERATED FOODS

**New York, N. Y.**—Seventeen General Electric refrigerators are to be installed in the Hospital for Cripples, 321 East 42nd Street, to replace a brine circulating system. Pipes of the old system will be removed and the cabinets formerly employed as refrigerators will serve a new purpose as storage cupboards. The youngsters are now appreciating the wholesomeness of refrigerated foods.

**DETROIT'S GREAT HOMELIKE HOTEL**

IN THE VERY HEART OF DETROIT

THE TULLER is the headquarters for tourists and travelers. Delightfully furnished, homelike atmosphere. Abundance of air and sunshine, large, spacious lobbies and lounging rooms. Famous for our restaurants.

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ROOMS WITH BATH

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HOTEL TULLER

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HAROLD A. SAGE, Manager

LAYE INC.

SEALED SLABS that fit snug!

made especially for Mechanical Refrigerators

Efficient insulation . . . factory-made into slabs to your own measurements . . . possessing all the advantages of both rigid and flexible types . . .

. . . Balsam-Wool Sealed Slabs! Ideal insulation for mechanical refrigerators.

They are built up to required thickness with layers of Balsam-Wool Blanket—positive assurance that each is completely filled with a *permanent*, non-settling, highly efficient insulation.

They fit snug—flexible enough to make joints that are *really* tight, yet rigid enough for easy handling. They go into place quickly. Save labor! And once there, they *stay* in place, firm, tight, efficient!

Carefully sealed against moisture. Permanent, light weight, sanitary, vermin-proof, odorless. They meet squarely the most exacting engineering standards for *true* insulation.

Their thermal conductivity does not average over .25 B. t. u. per square foot, per hour, per one inch thickness, per one degree Fahrenheit difference in temperature.

We will send free for your examination one of the *perfected* Balsam-Wool Sealed Slabs. Simply write our nearest sales office—today.

WOOD CONVERSION COMPANY

Mills at Cloquet, Minnesota

Industrial Sales Offices

Chicago, 360 No. Michigan Ave.

New York, 3107 Chanin Bldg. Detroit, 3084 West Grand Blvd.

*Manufacturers of Balsam-Wool Insulation for Domestic Refrigerators, Motor Buses and Airplanes; Balsam-Wool Refrigerator Car Insulation and Steel Passenger Car Insulation; Balsam-Wool Standard Building Insulation and Nu-Wood Insulating Board; Balsam-Wool Acoustical Blanket*

# DUBUQUE

(*Concluded from Page 1, Column 5*)

know more about the subject when he returned. Like Mr. Wertz, Mr. Rath is a man with his eyes and ears open for new ideas and is ready and willing to listen to any arguments in favor of quick-frozen meats.

Most of the smaller butchers had heard little about quick freezing but were willing to learn. John Jehring and Charles Kress were typical men of this type. Both admitted that frozen packaged meats probably would eliminate the small butcher as he exists today, but saw in the new processes many advantages for the man who could adapt himself to the new order of things. Neither seemed to think that the subject was one to get up in arms about.

A man with an exceedingly small shop on the Illinois side of the Mississippi river, interjected a new element into the discussion. Meat is only a minor item with him, but he said that he might be interested if the packers would back him in the way that the ice cream people do. He pointed out his four-hole Frigidaire ice cream cabinet, and said that it had been put in without charge to him by the local ice cream producers under an arrangement by which he could pay either 90 cents or $1.00 per gallon for his ice cream. If he paid the higher price, the 10 cents excess on each gallon went toward the purchase price of the ice cream cabinet. It is already about two-thirds paid for, and with the present hot spell speeding up ice cream sales he hopes to complete his payments before the season is over. The Hygrade plan now in operation in New York probably would suit his requirements.

As said before, in not a single butcher shop was there outspoken opposition to quick-frozen meats. The Dubuque butchers are alert-minded men who are waiting to be shown. At present they neither believe nor disbelieve in the packaged products. They can be educated one way or the other, either in favor of quick-frozen meats by the packers who are putting them out, or against them by the small group among the butchers that fears anything that may disturb the existing order of things. Which side will be the first to get its message to them, and the thousands like them all over the country?

# PROGRESSIVE

IN the progressive model town of Central Hershey, Cuba, where the Hershey Sugar Mill and Refinery are located, the General Electric refrigerator has become almost a standard piece of household equipment.

With a population of scarcely more than one hundred, the homes of the majority of the officials, as well as a big number of others already are equipped with General Electrics, while T. L. Montoro, refrigeration salesman for the General Electric Company of Cuba, says he expects to have this town sold 100 per cent before the summer of 1931.

"I think it will be of interest to readers to know that these men, professional and technical in the majority, are interested in refrigeration," he writes.

General Electric refrigerators have been purchased by: Mr. Hershey, for his private dining room; the general manager, assistant manager, chief accountant, cashier, chief chemist, research chemist, plant engineer, assistant plant engineer, char room superintendent, sugar floor superintendent, and members of the accounting department, experimental station, medical office, commercial department, general office and railroad employees. Mr. Montoro seems to have started at the top and gone right down the line in his sales effort.

## BAKERIES ARE ADOPTING REFRIGERATION

**San Francisco, Calif.**—One expects butchers to install efficient refrigeration, but when bakeries everywhere are rushing to install the same equipment, the evidence is complete that whether the food products are perishable or only semi-perishable, such as bakery goods, electric refrigeration will soon be standardized as a part of every well equipped food shop. Among the recent electric refrigeration installations in the Northern California territory are: Home Bakery, Alturas, Calif., Frigidaire equipment; Growers' Bakery, Stockton, Calif., General Electric refrigeration, and Nevada City, Calif., Kopp's Bakery.

## URUGUAY BOUND

**West Chester, Pa.**—The Esco Cabinet Co. has just shipped a model E-8 Esco milk cooler to Montevideo, Uruguay. This is the **first Esco** milk cooler to go into South America. Shipment was made through Ira A. Snyder, Inc., exporters of New York City to Ernesto Quincke, Kelvinator distributor at Montevideo.

# *Refrigerated Display in Up-to-Date Meat Market*

At the L. B. Wertz market in Dubuque the meat cutting is done in the rear, where the customer cannot see it. It is an easy step to packaged meats from this setup.

# DEMONSTRATIONS

**Louisville, Ky.**—E. D. Via, manager of the Electric Refrigeration Co., distributor of General Electric refrigerators, conducts an institute in the large basement room which the company has in addition to its regular offices in the Heyburn Building.

Frequent talks are given, with demonstrations, for various clubs and church societies. A straight donation of money is given the organization or 25 cents per person attending the demonstration. The women are served frozen ice cream and salads, while the talk deals with the advantages and economy, time saving and so on of electric refrigeration.

Different arrangements and programs are used each time. At one demonstration by the Kentucky Light and Power Company, the refrigerators were arranged around the room in a semi-circle, each refrigerator showing ice cream of a different color. The company gave an electric light bulb to each woman attending.

Mr. Via says these home economic demonstrations are most productive of results, a meeting of twenty-two women, for instance, producing two orders for refrigerators.

## THIRTEEN TEMPRITES IN MULTIPLE JOB

**Augusta, Maine**—The Central Maine Power Company has ordered thirteen Model No. 100-F Temprite pedestal drinking fixtures for installation in a standard multiple system for the W. S. Libby Company, Lewiston, Maine.

The installation is to be made by the Androscoggin Electric Co. This is the second Temprite multiple water cooling installation to be made in Lewiston this season.

## COLD STORAGE SPACE INCREASES

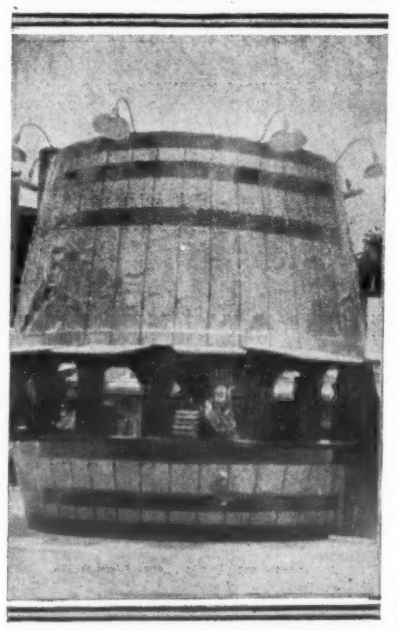
As part of its biennial survey of cold storage warehouses, the United States Bureau of Agricultural Economics, reports that the total refrigerated warehouse space in the United States on October 1, 1929, was 728,594,833 cu. ft. This is an increase of 9 per cent over the corresponding figure announced on October 1, 1927.

These warehouses were being operated by 1,400 concerns, also an increase over the 1927 figure, which was 1,323. Evidently the merger instinct has not yet conquered the cold storage business.

Space in public warehouses has increased in the last two years by 42,914,041 cu. ft. as compared with an increase of only 4,326,747 cu. ft. in private space.

## "THREE-IN-ONE"

**Kansas City, Mo.**—Copeland, Frigidaire and ice co-operate to supply the refrigeration needs of one of root beer vendors here. The "Barrel," reminiscent of pre-Volstead days, is a popular rendez-



vous on torrid summer days. It is owned by Gould & Barewin and stands at 3815 Main St.

Copeland's part consists of keeping the root beer at a temperature suitable for soothing parched throats. Frigidaire keeps the ice cream and ices firm, while ice is used for cooling the orange juice.

# NORTHEY

NORTHEY MANUFACTURING CO., with headquarters at Waterloo, Iowa, is marketing display and storage cases designed for handling quick-frozen or fresh meats, fruits and vegetables. The Northey Isetop counter is manufactured under the Burrows patent. This counter is arranged so that part of it may be used for fresh foods and by lowering the shelves it is adaptable for quick-frozen products. It is made with one-half inch plate glass and heavy insulated throughout. It is available with display only or combination of display and storage.

## REFRIGERATION GOES TO THE REFORMATORY

**Indianapolis, Ind.**—W. J. Holliday & Company, Servel distributor, just completed the installation of Servel equipment in the officers' building at the Indiana Reformatory at Pendleton.

This building is used by officers during their off hours and is equipped with all kinds of conveniences to add to the comfort and happiness of these men, including recreation rooms, gymnasium, reading rooms, etc.

The Servel equipment consists of a model 50-BW machine with 3 K sections and refrigerates a 120 cubic foot kitchen refrigerator.

## MODEL DAIRY FARM IS KELVINATOR EQUIPPED

**Louisville, Ky.**—The model dairy farm of J. H. Graham, president of the Indian Refinery Company, is equipped throughout with Kelvinator equipment. This farm, on the old Shepardsville Road, is a hobby of Mr. Graham and is conducted according to the most sanitary principles possible, though not a drop of the milk from the dairy is sold. It all goes either to the Kosair Hospital for Crippled Children or to the schools in the poorer districts. Cooling deters the growth of bacteria in the milk. After proper cooling, the milk is ready for its journey to the hospital. Insulated trucks transport the milk from the model dairy farm to the city.

# CONSERVATIVE

## British Butchers Are Agitated About Importation

THE ultra conservative British butcher, who has no use for Yankee progress, has become agitated about the importation of quick-frozen foods from the United States and other countries where they are achieving popularity. The agitation became so great that a delegation of die-hards visited the Ministry of Health to see if something couldn't be done to bar out these new-fangled notions. Judging from the following editorial, which appeared in the July 17th issue of Cold Storage and Produce Review, published in London, the Ministry turned the refrigerated shoulder to the grumblers. The editorial, appropriately entitled "Canuteish," says:

"Although those responsible for the move have been rather quiet about it, it is known that the Ministry of Health saw a deputation of meat retailers last week on the subject of rapid-frozen meats inspection. Similarly, although little has been said about the Westminster interview, we think we are right in saying that the deputation made but small impression on the Ministry in their demand that the rapid-frozen meats should be barred from entry under the Imported Meat Regulations on the ground of its being impossible to trace their origin as to a sound animal, and thus ensure their fitness for food. It is true that scrap meats which are unidentifiable as to cut are barred, and rightly so, in the existing Regulations, but if this exclusion were extended to the identifiable cut meats then the only logical step for the Ministry of Health to take would be to bar everything in the way of meat imports but whole carcases with all organs attached, which, as Euclid said, is absurd. If confidence cannot be acknowledged between the meat importing authorities here and the very carefully chosen personnel of Government meat inspection in the various meat-exporting countries, then the whole fabric of overseas meat trading is falsely woven, and must cease. We fear that the recent deputation has paid its visit too soon after the protest meetings against rapid-frozen meats to spare us all doubt of the motives of those so solicitous for the public health. A certain section of opinion in the retail meat trade has apparently determined to fight tooth and nail the marketing of rapid-frozen packaged meats. We trust that such a hopeless frame of mind will be rejected by all but a negligible minority of meat traders. Canute on the seashore is the only picture that such a minority would recall. If rapid freezing permits the marketing of food in a better, handier way, then nothing on earth can stop it. The only way that our butcher friends can assure themselves a proper share of this trade is to equip themselves for its accommodation in their shops, and thus take their place in this path to better meat sales."

# "FROSTED"

**Springfield, Mass.**—Some seasonal reduction of sales of the Birdseye Frosted Foods, due to the absence of many families on vacation, is reported by stores handling this line. However, a drive with spring lamb roasts at 39 cents a pound, July 25 and 26, produced good results. During the week beginning July 28 chicken broilers are being sold for 49 cents, a reduction from 65 cents, the price in force for some weeks past. This special promises to be of like advantage in sustaining interest in the heated season.

Reports that tempting fruit items will be added to the line soon help to keep consumers on the alert. It is also understood that the line of fish will be broadened. General Foods Corporation representatives continue to keep a close check on the campaign from every angle. The extreme hot weather that has prevailed most of the time for the last fortnight is putting the refrigeration cabinets to a special test, and observations now being made promise to be of value in establishing better standards for merchandising the products.

## TAVERN INSTALLS LATEST EQUIPMENT

**Bridgeport, Conn.**—Downes Smith Company, Frigidaire distributor for the Bridgeport territory, has installed complete refrigeration equipment in the Beacon House, tavern located on the summit of Sport Hill, Easton, according to Kenneth D. Woundy, service manager.

The equipment consists of a 400-lb. ice-maker, 4-hole ice cream cabinet, a large Seeger refrigerator and a smaller box of the same make. The ice-maker and cabinet are cooled by an N compressor with 17F coil. An A compressor with 2TF coil handles the two boxes.

Mrs. Robert Hinkes of Bridgeport is proprietress of the Beacon House, which is named for an air mail beacon located nearby.

# *THE PERFECT REFRIGERANT*

BOSTON has long been known as the Mecca of all good censors, and as America's Most Careful City—about what its populace reads. Consider, then, the case of the Boston *Globe*, which not long ago printed the following story about "petrified ice" in its news columns apparently in good faith. We are indebted to Patent Attorney H. R. Van Deventer for bringing it to our attention. An exact transcript follows:

"PETRIFIED ICE" THAT DOES NOT MELT FOR YEARS

"Beaver Flats, Neb. — Charley Laughing Horse, a halfbrood Indian ranchman residing in the bad lands, between Skull and Bloody Creeks, west of here, this week began shipment to the Eastern market of several carloads of petrified ice which is in demand for use in containers by manufacturers of ice cream and handlers of other perishable products.

"The petrified ice is procured from caves on a section of the Laughing Horse ranch. The caves were discovered by Mr. Laughing Horse several years ago, while he was chasing a coyote that took refuge therein.

"The petrified ice continues indefinitely its frigidity and has the density of the hardest flint. It refuses to melt or change form even when subjected to intense heat, and many of the residents of Beaver Flats are still running their household refrigerators on the original 50-pound chunks they placed there six or seven years ago.

"A number also are still running their cars with the original charges of ground petrified ice they placed in the radiators at that time to keep the engines from heating, and last year a warehouse in which a number of tons had been stored awaiting shipment burned down, leaving the contents intact and undamaged.

"The petrified ice is quarried much the same as granite and marble and the caves are considered inexhaustible, as the amount removed each Spring is replaced with the coming of the annual freeze-up each Winter."

# *Buyer's Guide Section*

# ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office.

**The business newspaper of the refrigeration industry**

VOL. 4, NO. 24, SERIAL NO. 100 | Copyright, 1930, by Business News Pub. Co. | DETROIT, MICHIGAN, JULY 30, 1930 | Entered as second class matter Aug. 1, 1927, at Detroit, Mich. | IN THREE PARTS, PART 3


# Office Equipment Featured In New Service to Industry Buyers

## Manufacturers Encouraged To Do Research on Refrigeration Needs

WITH this issue ELECTRIC REFRIGERATION NEWS presents a new service to its readers—a buyer's guide section. Its purpose is twofold: (1) to focus attention upon the housekeeping problems of the industry by offering ideas and suggestions for improving the efficiency of the business operations of the small local dealer as well as the larger organization; (2) to encourage manufacturers whose equipment may be useful to the industry to extend their research and further adapt their products to the needs of this field.

In the past the main white section of the News has dealt primarily with what the industry *sells*; these pink pages will be concerned chiefly with what the industry *buys*.

For the first of these pink-clad Buyer's Guides the NEWS has chosen to deal with office equipment. Most business men are familiar with the nature and use of the common office appliances. But few, unless they have had considerable experience as office managers, have had the opportunity to study in detail the application of many devices which afford considerable saving of time and money in business operations.

### Specialty Selling

Inasmuch as selling electric refrigerators essentially belongs to the realm of so-called "specialty selling," a number of activities are involved in which certain office appliances may be used advantageously. Among these are the collection, classification, and revision of extensive prospect lists.

Direct mail advertising prepares the prospect for the visit of the salesman, and follows up his personal calls. To avoid endless waste in advertising material, plus the more expensive waste of salesmen's time, records must be kept to co-ordinate and correlate direct mail and personal selling activities. Every sales manager discovers sooner or later how necessary a system is to the efficient conduct of these activities, and how much time it takes to keep even the simplest set of prospect records.

Beginning with an initial clean list of prospects, the manager of a small sales organization may start with just a card file and a typist. As he continues in business, complications appear. He must classify prospects according to geographic location, purchasing power, and other headings. New names constantly find their way into the lists. This calls for cross-checking of lists to eliminate duplications.

### Similar Procedure

Quite similar to the office procedure of a specialty selling organization is the subscription department of a publication. The latter has its regular mailing list and its prospect list. New subscriptions and renewals, paid and charge orders, changes of address—all these require close checking.

Readers of the NEWS, therefore, may be interested in knowing how this organization uses office machinery in working out the details of its mailing system. Both the advertising and subscription departments of the NEWS make use of direct mail in considerable volume. Because the customers and prospects of the NEWS are scattered far and wide all over the world, it is necessary to use mail more, and salesmen less, than a local specialty selling organization.

This has necessitated considerable thought and pursuance of the trial-and-error method in the adaptation of office appliances to the complex needs of the NEWS, and the results obtained may furnish dealers and distributors wtih valuable suggestions for solving their own particular dilemmas.

## NEW COPELAND DEALER IN DES MOINES

**Des Moines, Iowa**—The Standard Marble & Tile Company of this city has been named a dealer for Copeland. Offices and showroom will be maintained at 1913 Ingersol Avenue.

## *Pink*

A FEW months ago ELECTRIC REFRIGERATION NEWS defied trade publishing tradition by printing its "Refrigerated Food" section on yellow paper. Scientists have determined by tests, it was explained, that black ink on yellow paper is the most legible combination known.

Eye-restfulness has been discarded for eye-signalling in this new "Buyer's Guide" section of the NEWS, and pink paper has been adopted. Disregarding the dictates of science, the NEWS is following a very human impulse. It wants to attract attention.

## *Convenient, Condensed Records*

### Basis for Effective Sales Promotion

THIS cabinet-style visible index is used by the advertising department of ELECTRIC REFRIGERATION NEWS. High visibility is obtained by a color scheme which enables one to distinguish at once between the various classes of advertisers and prospects, and by the contrivance of typing names of companies on the lower edge of the card, which is in plain sight when the drawer is opened.

The cards used in this index are 8 by 10 inches in size, folded once so as to make four 8 by 5 inches surfaces. Ample space is provided for a complete record of calls, letters, and considerable data of any sort.

Wire holders, which slip up and down in the frame of the drawer, keep the cards in place. It is thus easy to insert additional cards in their proper order.

Cabinets may be obtained in various sizes. The one shown in the picture has a capacity of more than 1,000 cards. On the desk of a sales manager, or his assistant, a file of this sort encourages the immediate recording of all important data at the time it is obtained from salesmen's reports. Moreover, it is always within convenient reach during telephone conversations. Only one hand is needed to pull out the drawer, uncover the card desired, and turn it to expose all four sides.

The wire holders are constructed so that cards may be shifted one-half inch to the right as a reminder for further action. By arranging the cards according to salesmen or territories, the sales manager may discuss a set of prospect cards in his office with the particular salesman concerned.

When initiating the use of an index of this kind, or when a large number of new prospect names are secured, it is advisable to have all the names in each group typed in condensed form on a single card. As each individual prospect becomes active and requires an individual card, the name is crossed off on the general list and typed on a separate card.

In the file shown above, white cards are used for the general list, buff cards for prospects, and pink cards for customers. Naturally, it is a matter of pride to the sales manager to see his cards become pink.

## BOOKS ON OFFICE METHODS IN DETROIT LIBRARY

IN the technology department of the Detroit Public Library the following books concerning office management and office equipment are available. The name of the author, the title, the publisher, and place and date of publication for each book are listed in order for each book in the bibliography.

Additions to this list are invited from publishers and public libraries. Comments of readers on the value of particular books dealing with these subjects are also desired.

### OFFICE MANAGEMENT


Barrett, H. J.—Modern methods in the office; how to cut corners and save money. Harper & Bros., New York and London, 1918.

Blackman, H. A.—Business mail.

Boston Chamber of Commerce—Practical experience in office management.

Cahill, M. F.—Office practice. MacMillan, New York, 1917.

Campbell, W.—Modern business and its methods. Pitman, London, 1920.

Cadwallader, L. H.—Business forms and customs for every day use. J. C. Winston Co., Philadelphia, 1922.

Center, S. S.—Secretarial procedure. Ronald Press, New York, 1929.

Childs, G. S.; Clapp, E. J., and Lichtenberg, B.—Office management. Alexander Hamilton Institute, New York, 1819.

Childs, G. S.—Office administration. Modern business library, vol. 8, 1921.

Davies, J. P.—Engineering office systems and methods. McGraw-Hill, New York, 1915.

Dewey, M.—Office efficiency.

Dicksee, S. P.—Office organization and management. London, 1917.

Everitt, G. B.—Managing a large office force. Alexander Hamilton Institute, New York, 1914.

Equipment Research Corp.—Business machines and equipment digest, 1927.

Galloway, Lee—Factory and office administration. Alexander Hamilton Institute, New York, 1917.

Galloway, Lee—Office management with special consideration of the employment, training and payment of office workers. Ronald Press, New York, 1918.

Galloway, Lee—Organizing the stenographer department. Ronald Press, New York, 1924.

Gardiner, D. L.—Practical office supervision. McGraw-Hill, New York, 1929.

Graham, W. J.—Cost accounting and office equipment. American Technical Society, Chicago, 1929.

Hazell, W. H.—Office organization for printers. Federation of master printers, London, 1920.

Hysell, Helen—Handling callers in the business office. The Purchasing Agent Co., New York, 1924.



*(Concluded on Page 5, Column 5)*


# Sales Organizations Offer Excellent Market for Modern Appliances

## Refrigeration Industry Makes Use of Direct-Mail Advertising on Large Scale

ARMED with considerable buying power by virtue of its demonstrated selling power, the electric refrigeration industry offers a profitable market for manufacturers of modern office equipment and machinery. Young and aggressive, and engaged in a hot competitive struggle for the development of a nation-wide sales territory which is only 10 per cent saturated, the industry is not afraid of spending money to make money.

Specialty selling is the strong right arm of the electric refrigeration business; and for organized specialty selling system and efficiency in the handling of records are essential. Thus a double-edged problem is presented both to the manufacturer of office machinery and to the man who directs refrigeration sales; viz., how can the dealer, distributor, or sales manager best route his salesmen, mail his literature, check his prospect lists, and keep his accounts and records?

The dealer's problem is to perform these operations with a comparatively small office force and with a not-too-great outlay of money. For the manufacturer of office equipment the problem is that of figuring out the best methods of applying his mechanical devices to the needs of a specialty-selling organization.

### New Field

Almost virgin territory is this brand new field for office equipment. In the first place, many dealers and distributors have been too busy developing and organizing sales forces and sales technique to spend a great deal of time in refining their office management.

And because the industry is comparatively young, makers of store and office equipment may not have had this newly-developed market brought to their attention in its full potentialities. The industry as a whole is constantly enlarging. Every issue of the NEWS contains several notices of the opening of new offices, new display rooms, new stores.

Too, dealers and distributors who handled refrigeration gingerly at first—buying quite conservatively until they could see whether or not they were going to "make a go of it" or not—are now adding elaborate display rooms and equipping large offices completely to handle the increase in business contemplated in the future.

### Keen Competition

Practically every company in the field has mapped out plans for expansion. Other manufacturers are preparing to enter the lists in this highly competitive market. Keen competition is, aside from its remarkable sales record, one of the most outstanding factors in the business. Vigorous, youthful men who are thorough exponents of modern business and engineering methods are at the helms of the leading organizations. They are eager to acquire new "wrinkles" in labor and time-saving devices.

Refrigeration manufacturers are reporting sales increases ranging from 25 per cent to 100 per cent this year. They are planning to sell a million units, with a retail value of more than $300,000,000 during 1930. Spurred on by the knowledge that 90 per cent of the nation's wired homes are still without electric refrigeration, the industry is working up enthusiasm for big sales campaigns in the future.

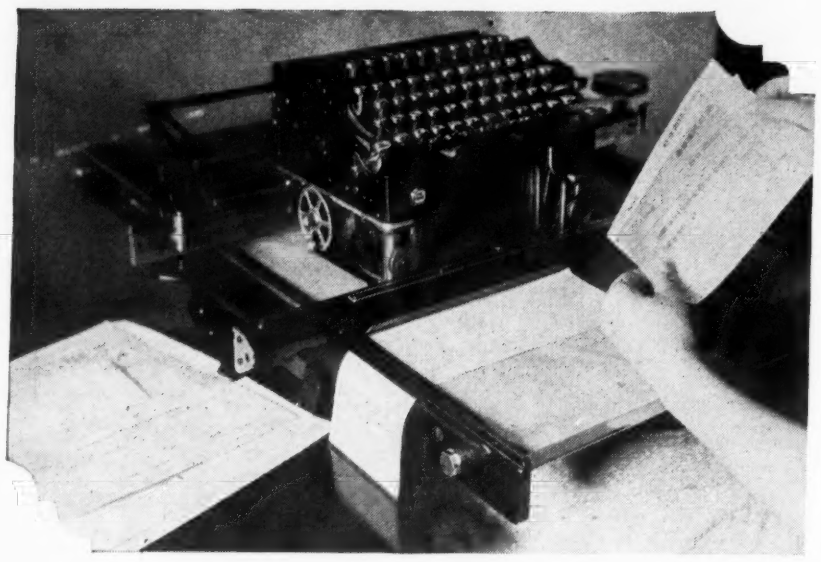
Manufacturers of any and all products designed to increase efficiency in production, promotion, display, and recording will find here a growing business and an unexploited market.

## DEPARTMENT STORE TO SELL REFRIGERATORS

**Louisville, Ky.**—Kaufman-Straus, one of the largest department stores in Louisville, is to handle the Rice refrigerator, made by the Rice Products, Inc., of Detroit.

# HOW THE NEWS USES MACHINES

## Devices Coordinated to Insure Efficiency in Mailing



### PRACTICAL EXPERIENCE

Much time has been expended by the management of ELECTRIC REFRIGERATION NEWS in selecting office equipment and in working out the details of the system for handling records and accounts. In this section of the paper, all illustrations are made from photographs of office equipment in actual use by the NEWS.

Many of the office problems of a specialty selling organization are very similar to those of a publishing business. The handling of large prospect lists and frequent sales promotion campaigns with extensive use of direct mail advertising may be pointed out as examples.

In recommending the fullest possible use of machines as a substitute for clerical labor, the NEWS is merely preaching what it practices.

* * *

## SUBSCRIPTION ORDER FOLLOWS LONG TRAIL

IT is a matter of common knowledge that the subscription price paid for a publication is merely nominal. Revenue from subscriptions is not only insufficient to pay for the cost of printing and mailing, but is scarcely enough to pay for the bookkeeping operations involved in handling the subscriber's order.

Let us follow an order into the office of the NEWS and watch what happens to it. The postman walks into the reception room and deposits his bundle of mail at the desk of an attractive blonde telephone operator. It is her task to open all of the mail, and she takes great care in the fulfilling of this duty.

As she opens each letter she notes whether or not there is any reference to an enclosure, such as a check or cash remittance. Frequently subscribers intend to enclose payment for a subscription, but neglect to do so. If this has occurred, a notation of the fact is made at once.

Again the subscription order may have an incomplete address. The missing facts may be determined in this case from the envelope return imprint or the postmark. Sometimes a stamp is the only identification of the country of origin to be found on foreign subscription orders.

#### Registering the Remittance

The various classes of mail are separated, and all subscription mail is divided into two parts. Group one contains all letters with remittances; while the remainder comprises group two. The first set is taken at once to the cashier, and the remittance is registered on the bookkeeping machine. The remittance may then be removed from the order. The machine-printed registration serves as a cashier's receipt.

Identification is the next step in handling subscription mail. For this process all orders are sent to the visible index file, which contains a record of every subscriber and prospect. By referring to this record, it may be determined whether the subscription is new or renewal, or whether the payment is on account. Each order is marked accordingly.

An experienced member of the organization then takes up the burden, and interprets the information. Letterheads are often misleading, and it is extremely important to definitely determine where the paper is to be sent.

There is also the problem of deciphering handwriting, and particularly the spelling of the name in the signature, for all men, unfortunately, do not sign their names as legibly as John Hancock signed the Declaration of Independence.

To new subscriptions the order clerk assigns a number, determines the correct rate and the period of the subscription, and adds other classification data.

A single letter may contain an order for one or more subscriptions, a request for information from the advertising department, and a news-item for the editorial department. These parts of the letter are separated and copies referred to each of the departments concerned. All copies are made on a regular "miscellaneous information" form with an Elliott-Fisher machine.

#### Writing the Order

As shown above, the Elliott-Fisher machine is essentially a typewriter. It has, however, a flat-bed platen, instead

of the cylindrical type found on the ordinary typewriter. As each key is touched, the machine moves across the platen, instead of vice versa.

One of this machine's chief advantages is the fact that multiple forms may be fed through interleaved carbon paper. From left to right these forms move across the machine, while the carbon paper comes at right angles from a roll at the back. As the carbon wears, a fresh section may be pulled into position.

Multiple forms for the Elliott-Fisher may be obtained in perforated fan-fold style, which makes for a great saving in handling, since the act of pulling one set of forms through the machine automatically pulls the next set into place through the carbon sheets. Ordinarily the operation of interleaving the carbon sheets for a typewriter consumes considerable time.

Subscription orders are written in triplicate. The original copy goes to the accounting department, where it is billed. The accounting department also makes out a permanent ledger card for the record of the subscription in future years.

#### Making the Plate

The second or duplicate copy goes to the Graphotype operator, who makes a plate therefrom. Index cards and other records are made from this plate.

The triplicate copy is inserted into a binder, in which all orders are placed as received and arranged chronologically, thus keeping together all records of each day's business.

Once a subscription has been received and recorded, the next movement in getting the paper to the subscriber is the process of getting his name embossed on an Addressograph plate. This is done by a Graphotype, pictured above.

The embossing operation is performed by an operator, who inserts a blank metal plate into the Graphotype, and punches the address and other information on the plate letter-by-letter.

#### Addressing the Label

After the metal plate is punched, it is inserted into a frame, which has room also for a card containing an imprint of the plate, and for the metal tabs by means of which the Addressograph performs its selective activities.

When the frame is fitted with its plate and card, it is filed in a metal cabinet according to its mail routing. It is ready then for use in the addressing operation.

Upon beginning her task, the Addressograph operator inserts a drawerful of plates into the machine and presses a foot pedal. As soon as used, the plates drop back into a drawer in their original and permanent order.

## Names Imprinted on Gummed Tape to Prevent Errors

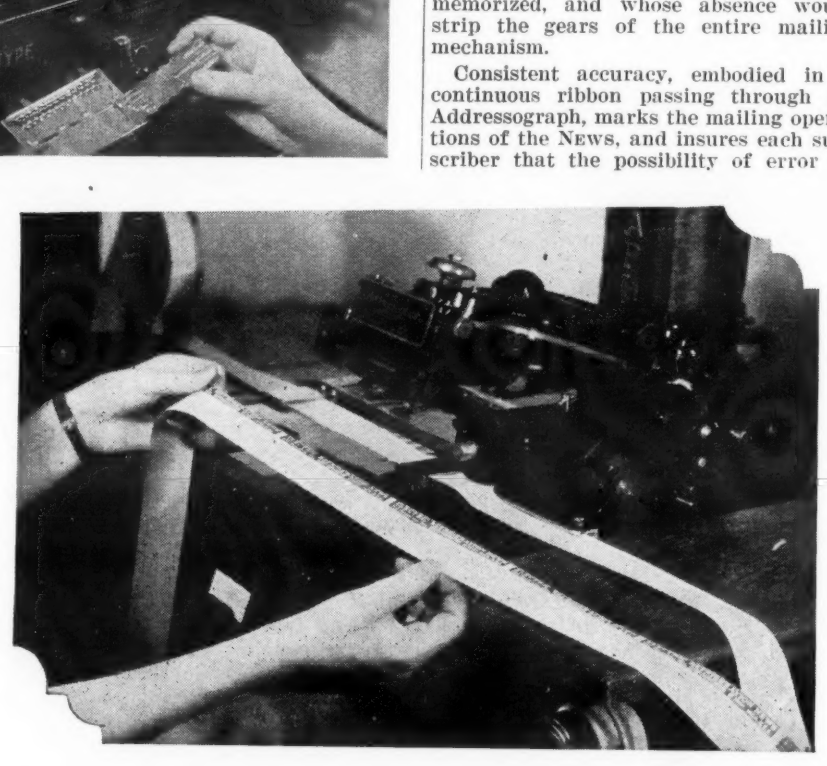
WHEN your copy of ELECTRIC REFRIGERATION NEWS is delivered to your desk or to your door, it does not get there by chance alone plus the good graces of the United States postoffice department. Nor does it arrive because of the genius of some tall-brained individual who has the whole subscription list memorized, and whose absence would strip the gears of the entire mailing mechanism.

Consistent accuracy, embodied in a continuous ribbon passing through an Addressograph, marks the mailing operations of the NEWS, and insures each subscriber that the possibility of error in getting him his regular copy of the NEWS has been cut to the smallest imaginable point.

A special attachment enables the NEWS to do its addressing on a continuous tape of gummed labels. At the insistence of the NEWS, the Addressograph company went into its laboratory and came out with the attachment which enables the machine to handle a narrow ribbon or tape consisting of labels laid end to end. By putting the perforation across the short side, the labels are easily separated. The old method of addressing tape made it necessary to have the perforation on the long side.

When mailing time rolls around, the Addressograph operator adjusts the roll of gummed labels, inserts a drawerful of plates in her machine, and starts the continuous line of addressed labels rolling out the side. One drawer of plates succeeds another in regular order until the whole mailing list has been addressed uniformly by cities, and states. As fast as they are used the plates drop into the same places in their respective drawers that they regularly occupy. Thus each addressing operation is exactly like every preceding one.

The roll of addressed gum labels is taken to the mailing room. Here it is guided through a Counterboy tape moistener. As the tape slides through the moistener a girl detaches each addressed label and affixes it to a wrapped copy of the NEWS. Since the Addressograph has printed these labels in town groupings and has stamped the town label for each package during the same operation, it is a simple matter to amass all papers for one postal station in one bundle and put it into a mail bag.



## TWO WAYS TO CLASSIFY SALES PROSPECT LIST FOR THE DEALER

FROM the sales promotion viewpoint there are two basic reasons for classifying a prospect list. Broadly speaking there are two ways to promote sales: (1) by personal salesmanship, (2) by mass salesmanship or advertising. Most successful sales plans consist of a judicious combination of the two methods.

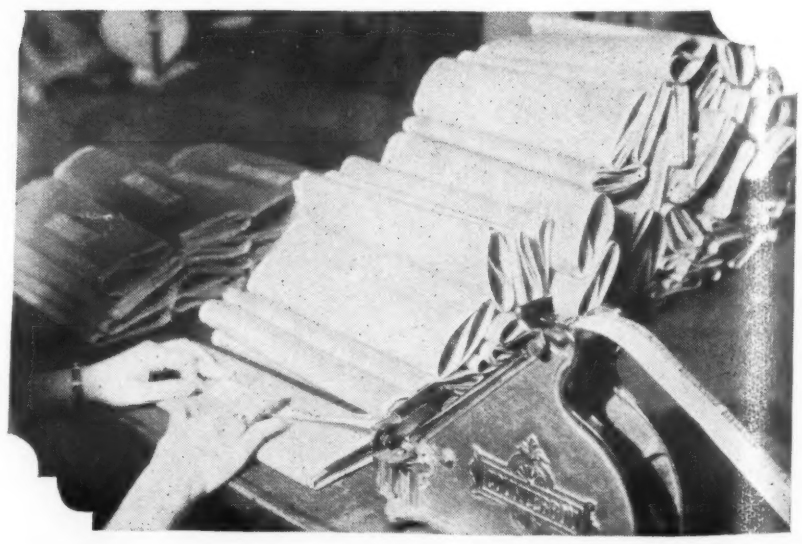
Therefore, the prospect list is usually arranged geographically with a view to the assignment of names to salesmen. Thus, all of the prospects in a given territory or section of the city are put into one group.

Again the list is classified with advertising considerations in mind. For example, prospects may be divided into two broad classifications, domestic and commercial. Domestic prospects may be further subdivided according to whether they are home owners, renters or apartment dwellers. Commercial prospects may be classified into such groups as grocers, meat dealers, florists, druggists, etc.

If the plan calls for direct advertising by mail it is highly essential that letters and printed literature be designed so as to appeal to the interests of the prospect. This means that the letter or advertising copy must be written with the needs of the prospect in mind. Obviously, the architect cannot be approached from the same viewpoint as an apartment tenant and a booklet dealing with the preservation of meat is unsuitable for the florist.

Looking at the prospect list in terms of advertising, it follows that each group or classification of names should consist of those who may receive the same letter or the same piece of literature. A single classification may contain six names or six thousand—the number is unimportant.

In general, every prospect list should be prepared in duplicate and filed two ways. Thus, one file may be arranged geographically or according to location while the other file is divided into classifications for direct mail purposes.

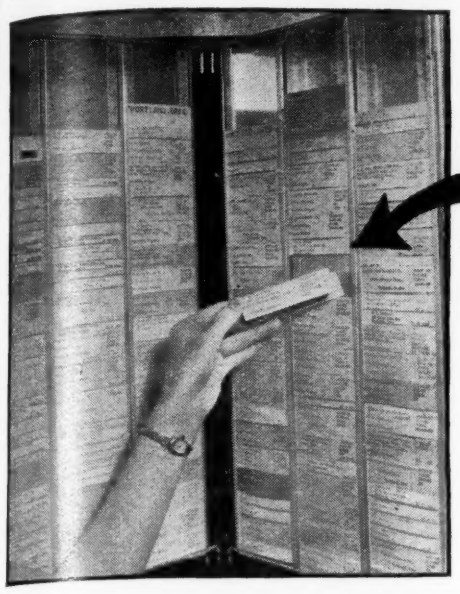


### FARM MARKET GROWING IN CALIFORNIA

**Rio Vista, Calif.**—The increasing interest of dwellers in the rural districts in the problems of refrigeration is indicated by the recent meeting of the Rio Vista Farm Center, when J. P. Fairbanks of the agricultural engineering division of the University of California discussed the various kinds of refrigerators and the several ways in which good refrigeration could be secured. He dwelt particularly on the types of mechanical or electrical refrigerators now on the market.

### MEXICO SHOWS INTEREST

**Omaha, Neb.**—John N. Clemmer, export agent for the Baker Ice Machine Company, Omaha, has returned from a month's trip through Mexico. He reports the Mexican business men as taking rapidly to mechanical refrigeration.



Postindex visible file system used by the News for subscription records and prospect lists. Names are filled geographically.

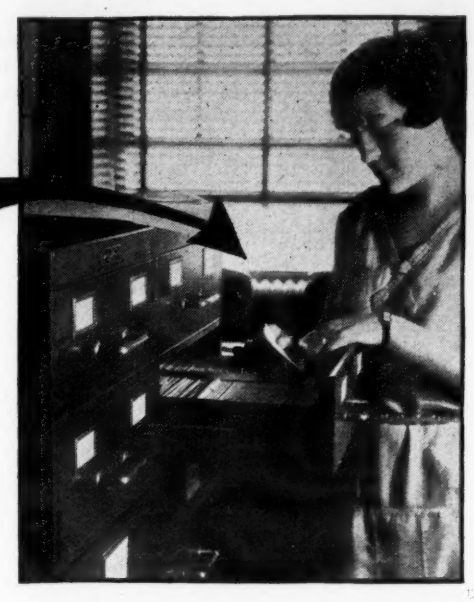
# *Coordinating Two Filing Systems*

## Machine Prints Perforated Cards in Duplicate

| | |
|---|---|
| H. D. Laidley,<br>% The Laidley Co.,<br>603 Terminal Sales Bldg.,<br><br>Portland, Oregon. | 12822-1Y<br>12-31-30<br>PD200<br>Z8-DD-GE<br>A79 |

| | |
|---|---|
| H. D. Laidley,<br>% The Laidley Co.,<br>603 Terminal Sales Bldg.,<br><br>Portland, Oregon. | 12822-1Y<br>12-31-30<br>PD200<br>Z8-DD-GE<br>A79 |

This double card, printed in duplicate on the Addressograph, is separated at the vertical perforation, one part going into the visible file and the other into the card cabinet. The left hand part is folded at the horizontal perforations to a size four by one inches.



The three-by-five-inch cards are filed according to expiration dates. All cards in one group are picked up for the purpose of sending out expiration notices.

* * *

# GEOGRAPHIC LIST IS VISIBLE; EXPIRATIONS GROUPED BY MONTHS

A SUPPLY of white cards, size 3 x 5 inches, provides the basis for a sales promotion "system" in its simplest form. These cards, together with alphabetical guides and a box or cabinet to keep them in, may be obtained at any stationery or office supply store. Names and addresses of customers or prospects, with such additional "data" as is available, may be written or typed on the cards, using a separate card for each name. Cards may be removed and new cards added in proper order. Flexibility is the keynote of the system.

If the list contains several thousand names, however, and if it is in constant daily use, the old reliable card file begins to have its limitations. An appreciable amount of time is required to thumb through the cards to locate the one desired. The card must be removed from the file to make correction in the data. Errors are frequent, due to the similarity of names or initials. Once a card is misfiled it is practically lost until it turns up by accidental discovery.

Such objections created the demand for a "visible" index system and a number of different makes are now on the market. Each visible system has its peculiar advantages (and sometimes its disadvantages). One may spend hours, even days, studying the various types of equipment in an effort to find the one most suitable to his business requirements.

In the office of the NEWS a combination of the visible and the card cabinet systems is used for the subscription list. Subscribers' names are filed geopraphically by states and cities in the visible system and the same names are filed by expiration dates in the card cabinet. Above is shown the combination card which is printed on the Addressograph. By a simple adjustment of the machine two impressions of each plate are made, one on each side of the vertical perforation. The right and left-hand parts of the card are then separated. The left-hand card is folded at each of the two horizontal perforations so as to fit into the visible index frame. This scheme was worked out in the office of the NEWS and has a number of interesting features.

The principal advantage is that the cards for both system are imprinted at the same time from an Addressograph plate. In handling a subscription record attention is focused on getting the plate right. Once this is done all future impressions may be relied upon. When corrections in the address or data are necessary it then becomes important that all old cards be removed and the new cards put in their place. If the various records are corrected one at a time there is always danger of error. Hence, the advantage of the perforated card which necessitates the completion of the job in one operation.

Dimensions play an important part in the workability of this combination index card. A card 4 inches wide by 1 inch deep is just the right size to take the imprint of a 5-line Addressograph plate, with a quarter-inch margin at each side. The Postindex frames are designed to fit a card folded twice so as to make three thicknesses. When the card is folded into this Z-shape it will hold its position in the frame. It only is necessary to bend the card slightly to insert or remove it from the frame. It will be noted therefore that the depth required for the Postindex card is the same as that of a standard 5x3-inch file card. The combination card is 9 inches wide by 3 inches deep.

This matter of dimensions may appear trivial, but anyone who has had the problem of co-ordinating office equipment knows how difficult it is to make any two systems "work together." In this case three pieces of standard equipment, made by three different manufacturers, are co-ordinated in terms of dimensions.

Discussions with the salesmen representing both the Addressograph and Postindex company brought out the fact that neither of these companies were aware that their equipment could be "hooked up" in the manner previously explained. In fact, inquiry was made to both companies as well as to other manufacturers of addressing machine and visible index files in an effort to locate a visible index which would accommodate a card imprinted directly by the addressing machine. The problem was also put up to representatives in charge of business equipment shows held in Chicago and Detroit, but none were able to offer any answer.

In general it may be said that most office devices have been developed in single units, and it is only very recently that the manufacturers of such appliances appear to be giving any serious thought to the matter of co-ordination. The above example emphasizes the opportunity which exists for standardizing dimensions of paper so that various machines may be used to greater advantage in the modern place of business.

## WESTINGHOUSE ACTIVE IN EASTERN TERRITORY

**Springfield, Mass.**—The Automatic Oil Heating Co., 238 Dwight Street, has been appointed retail dealer for the Westinghouse Refrigerator in this city and adjacent towns. Sub-dealers will be appointed at Chicopee, Westfield, Ludlow, and other points. Other dealers are: Baker Art & Electric Shop, 41 Maple Street, Holyoke; Mutual Plumbing & Heating Co., Amherst; George W. Wilcox, Greenfield; H. W. Small, Great Barrington.

## MILWAUKEE SALES SHOW 42 PER CENT INCREASE

**Milwaukee, Wis.**—Sales of General Electric refrigerators in the Milwaukee district for the first six months of this year were 42 per cent ahead of the corresponding period of last year, E. H. Schaefer, president of the E. H. Schaefer, Inc., distributor, announced.

"Our business has shown a most satisfactory increase," Mr. Schaefer stated, "and from present indications the industry can face the last half of the year with confidence."

Other Milwaukee distributors also report increases in sales during the first part of this year and with business in general getting under way and showing real signs of flourishing the dealers are hopeful for a large sales volume for 1930.

## *Where Can We Get a Machine for This Job?*

One job for which the NEWS hasn't been able to find a satisfactory machine is that of wrapping the paper. Pictured above is a portion of the mailing room of the NEWS in the basement of the Maccabees building. It is necessary to hire extra help to do the wrapping every mailing day—a necessity which could be eliminated with proper machinery.

# Put your good ideas to *work*

Good ideas are elusive! They seldom reach their intended goal unless you use them *as they occur.*

And your best ideas have a way of occurring just when there's no one around to take your dictation. So you either lose them forever or scratch a hasty, incomplete note that runs an equal chance of being lost.

But with a Dictaphone *always* at your elbow, every thought worth recording goes off your mind and on its way the instant it occurs.

Your Dictaphone is never late, never sick, doesn't go out to lunch nor ask for time off and it never objects to working overtime. It *lives* on your desk.

Every executive is entitled to Dictaphone convenience. Try it *yourself* in your own office. No obligation.

**DICTAPHONE**

*doubles your ability to get things done.*

*The word DICTAPHONE is the Registered Trade-Mark of Dictaphone Corporation, Makers of Dictating Machines and accessories to which said Trade-Mark is Applied.*

E. M. Thal . . . Dictaphone Sales Corporation
601 Park Avenue Building Detroit, Michigan

BUYER'S GUIDE SECTION
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*The Business Newspaper of the Refrigeration Industry*
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## Coordination

ANYONE who starts out to equip an office with modern appliances for speed, convenience and labor saving, will be impressed by the fact that almost every machine has been invented and developed as a single unit. It would appear that little thought has been given to the possibility that a considerable number of mechanical contrivances are needed by one business organization and that all of these machines must fit into some general office system.

We are inclined to believe that a large share of the sales resistance to many worth while office devices comes from the fact that expensive changes in the general system are frequently necessary before the new equipment may be put into service. Often it is necessary to "throw out" all the old records and make a new set on special forms of a different size before the advantages of the new machine may be realized.

If there is any such thing as a common denominator to office appliances it probably is paper. Most of the routine operations in an office consist of doing things with pieces of paper. A large number of the ingenious devices for office use perform some sort of operation on paper. Yet a great many appliances are designed to use only a special size, shape or thickness of paper. It is true, of course, that the mechanical requirements often demand certain punchings or die cuttings, but the fact remains that much sales resistance could be eliminated by co-operative work among manufacturers in the direction of standardizing paper sizes.

Unfortunately, certain sizes of paper adopted by the handwriting predecessors of the present business generation are far from suitable for the machine age. The 8½ by 11 inch letterhead, for example, which is recognized as the standard size in America, is well proportioned for a handwritten message. It is unnecessarily wide for a legible length of typewritten line. Some authorities claim that 39 letters in a line of type is the most readable length. The short lines of news print are, no doubt, an important reason for the popularity of newspapers with the American public. Books usually have longer lines—one reason, perhaps, for the sales resistance to good literature.

The standard letterhead adopted by Germany, before the war, reveals the mental processes of a mechanically-minded nation. It is narrower and longer than the American standard. The wasteful margins of a letter are eliminated and more lines may be written without the need for a second sheet. Every American stenographer knows how often she finds it necessary to use a second sheet to accommodate the last two or three lines and provide space for the signature.

Referring again to the problem of coördinating office equipment, if the job appears to be too formidable, give a thought to the economies which have been effected in the electrical industry through standardization. Take attachment plugs and wall outlets for example. There was a time when dozens of attachment plugs for electrical appliances were on the market. Each one would fit only the wall outlet made by the same manufacturer. None were interchangeable. This resulted in endless inconvenience and irritation to the householders who attempted to use electrical appliances.

Finally the industry became conscious of this situation as an obstacle to the widespread use of electrical service. A campaign was carried on to get manufacturers to adopt a standard plug to be furnished with all electric irons, toasters, lamps, vacuum cleaners, washing machines, etc. At the same time architects, builders, and electrical contractors were urged to install only the one style of outlet which had been selected as standard. It would be hard to estimate the tremendous benefits which have accrued to the industry as a result of this movement. Certainly it was an important factor in the present popularity of electrical appliances in the home.

## *Good Combination for Small Office*

Good ears, good voice, and good looks are all prime requisites for the girl who operates the telephone under the system devised by the NEWS. She must have good ears to operate her switchboard, and to transcribe dictation from the Dictaphone—the job which she combines with her telephone duties. Good looks, a good voice, and agreeable manners help make it pleasant for visitors who enter the reception room.

IN small offices the girl at the telephone switchboard usually has extra time hanging on her hands between calls. To fill her idle moments many odd jobs are often given the operator which do not add to her respect for position. In the NEWS office, however, the switchboard operator has another "high grade" activity for her spare time. She combines with her telephone work the transcribing of correspondence from Dictaphone cylinders.

Good hearing is required for both jobs. The operator must be able to understand mumblings of all varieties and in all keys which come over the wire, as well as those which sometimes occur on the records dictated in the office.

It is a job which can be interrupted on the instant a call comes in and resumed, without losing the continuity, as soon as she has adjusted the keys. A foot pedal stops the machine and starts it exactly where the dictation was cut off. Another pedal will make the Dictaphone backtrack, so that the operator can rehear a sentence or a phrase. Dictaphone work, too, is of a private nature. Nobody waiting in the reception room can hear the Dictaphone.

Advantages of the Dictaphone rest chiefly in its ability to conserve time. The stenographer does not have to spend any time taking down letters or other material in shorthand, but transcribes directly as she hears the dictation coming from the machine.

Moreover, the load can be distributed more evenly among several stenographers. If one has work piled up around her, and another is less busy, the cylinders can be divided up between them. It is especially useful in an office where there are several men who have only a few letters a day to dictate.

## CASH REGISTER CO. HISTORY REVIEWED

"...A saloonkeeper went to sea: a middle-aged coal-dealer went adrift. Thereafter America was taught salesmanship by John Henry Patterson." Thus begins the analysis made by August issue of *Fortune* of the dynamic career of the man who was the National Cash Register Co., and who invented high-pressure specialty selling.

From watching an indicator which tallied the revolutions of an ocean-going ship's propeller, Dayton saloonkeeper James Ritty got the notion of a machine which would make it risky for bartenders to cheat. At the age of 41, impetuous John Patterson (with his brother) sunk all his money into this device—and the next day offered $2,000 to rescind the contract to buy!

Faced with the necessity of pulling his money out of this deep hole, and of overcoming deep-rooted sales resistance and prejudice against his machine, John Patterson took custom by the horns. After the failure of his black-bag models to help his salesmen, he obtained a prospect list of 5,000 names. On 18 successive days he sent different, original, compelling circulars to each of these prospects. And in 1884 this proceeding was so startling and high-handed that one prospect, according to *Fortune*, returned his ninth circular with the notation: "Let-up. We never done you any harm."

But Patterson would not let up ,and five years later he was spending $4,000 a month for direct-mail advertising. He taught salesmen by rote, how to sell. He instituted the sales convention. He increased the pressure. He spent large sums on research. He turned profits back into capital, and shared them munificently with his employes. He drove competitors out of business.

Today the founder of specialty sell-

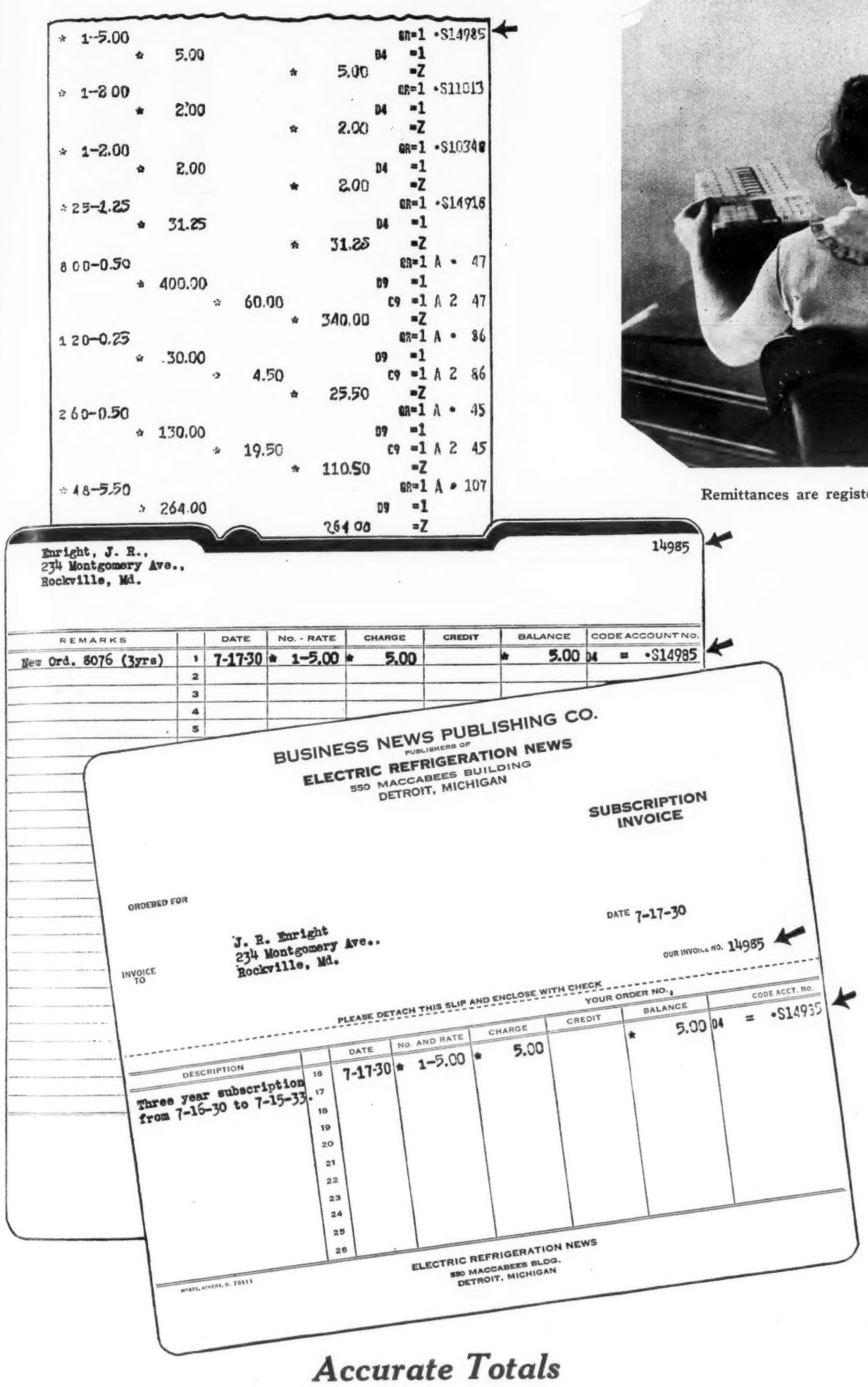
ing and the modern use of direct-mail advertising is revered over at Dayton, Ohio, as an immortal. While his successors are conquering the world with their new models (55 per cent of the N. C. R. business the first five months of 1930, was foreign) they are still living according to Patterson's fads, modelling their lives after his epigrams, and making their decisions out of his book.

## *No Time Lost in Taking Notes*

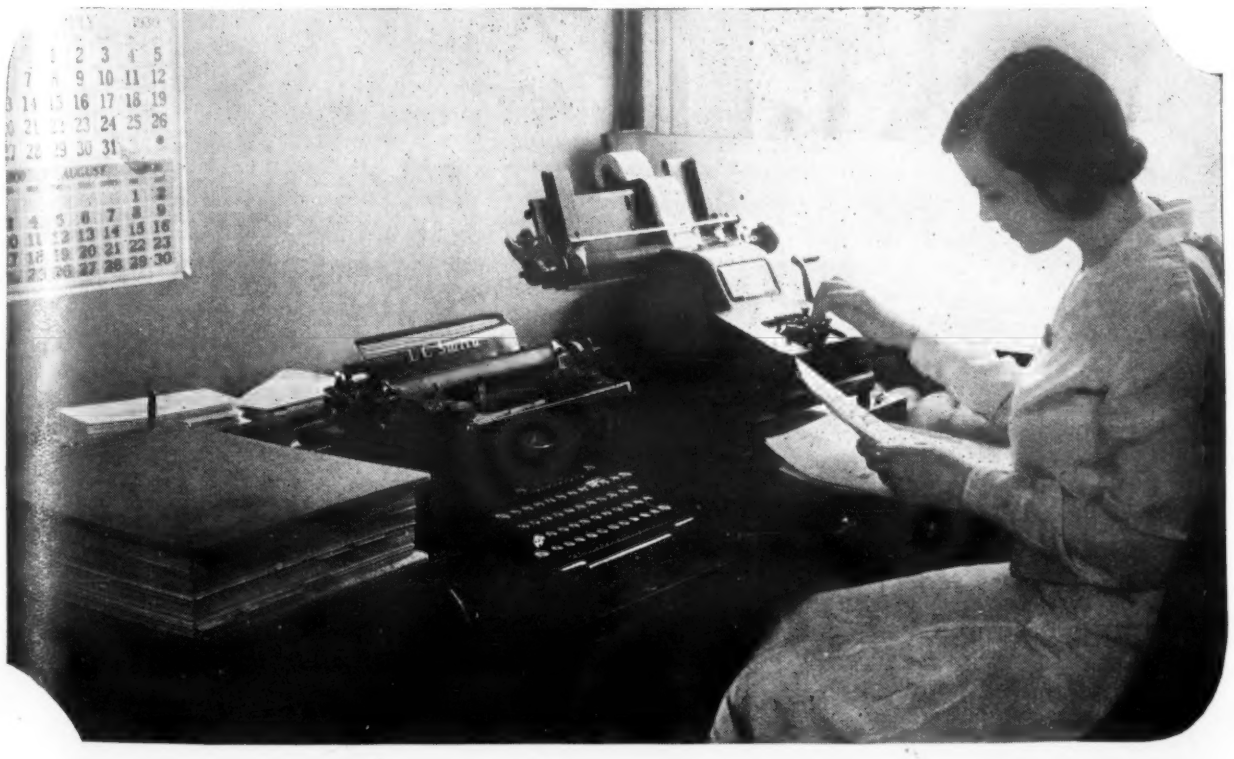
The advertising manager's voluminous correspondence is handled by this dictaphone operator.

## ARROWS

at the right of the forms reproduced below show how the account number on an invoice or ledger card is repeated by the bookkeeping machine to provide an absolute check on the accuracy of each operation.

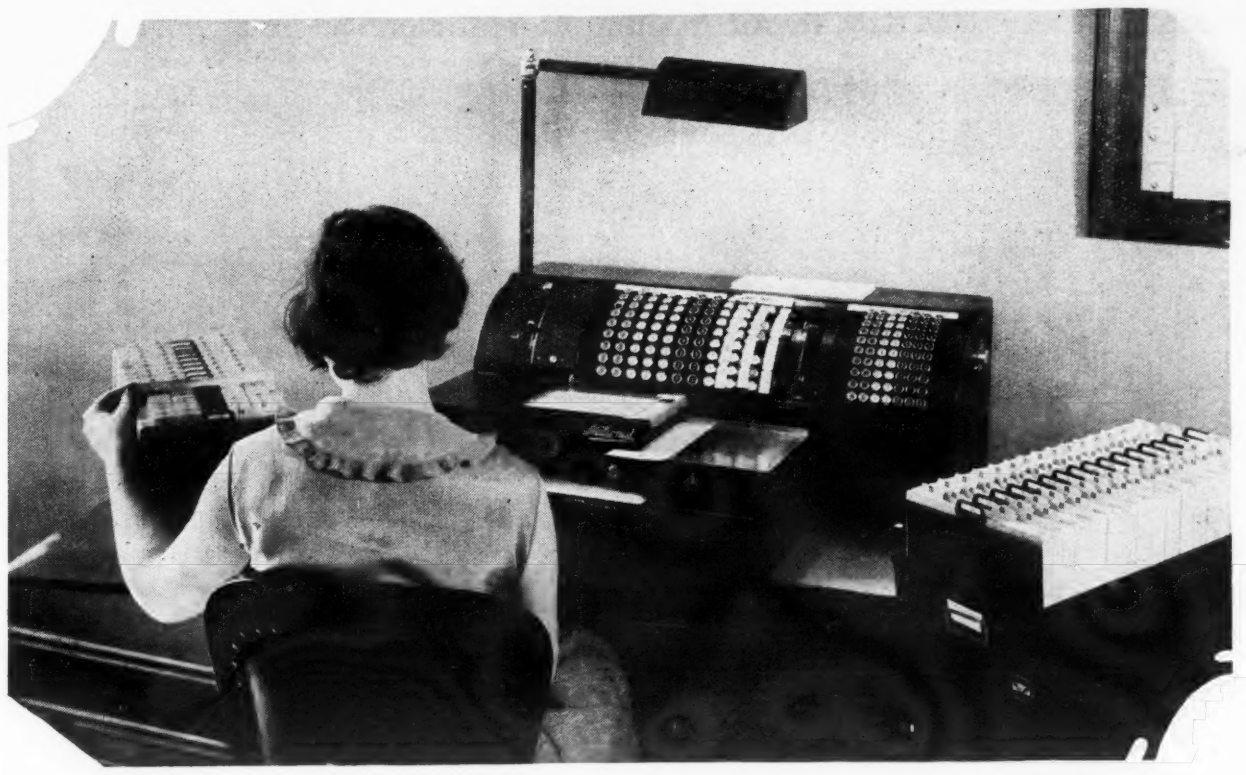



## Accurate Totals



The platen attachment on the adding machine shown above permits the printing and totaling of several columns of figures on a large sheet of paper.

# *All Bookkeeping Done by Machine*



Remittances are registered, invoices are printed and accounts posted. Debits, credits and balances appear in their proper columns.

* * * * * *

## Four Complete Records of Every Entry Printed Automatically

ILLUSTRATED on this page is one of the highest developments of the National Cash Register Co. Practically all bookkeeping operations of a moderate-sized business may be done on this machine. Each of its type is built to order to suit the needs of the business for which it will be used. As designed for ELECTRIC REFRIGERATION NEWS this machine will perform the following operations:

(1) It will print four records of every operation—one on the roll of tape in the machine, one on a form (any size) which is inserted in the slot at the right, and two impressions on special forms which are inserted below the table.

(2) It will store 18 separate subclassification totals and print the record of these totals at the end of the day. Nine are used for debits: the other nine for credits. One key, for instance, is used for remittances received. Every remittance is registered by making an impression of the date, amount, and classification symbol on the accompanying letter, and by making the same record on a ledger card which corresponds to the customary cash book. For any given period, remittance totals can be checked against a similar record of bank deposits and entries to customer's accounts.

Invoice forms are also printed by the machine. When the invoice is made out, the order record from which the data was taken is registered for checking purposes. The same order, or a duplicate invoice, is registered when the entry is made on the customer's account card. In general, each time an entry is made on an account card, a duplicate registration of the entry is made on the record from which the data was taken. Errors are thus located easily.

General ledger cards are put through the machine in the same way as customer's ledger cards. All account cards are numbered, and the account number is printed at the same time that a debit or credit is entered. Each entry on a given account card has its number in plain sight. Therefore if an error is made it is immediately apparent.

A separate key is apportioned to every operator of the machine, and a symbol which corresponds to this key is printed whenever the operator uses the register: hence it is a simple matter to discover who is responsible for errors.

This particular cash register prints debits and credits in two separate columns, and automatically calculates the balance. An old balance may be picked up, one or more new debits made to the account, one or more credits added, and the machine will automatically print the final balance. Twenty letters of the alphabet in two rows of keys at the right are used for symbols to indicate the various classes of debits and credits.

The same keys which are used to punch up the total amount in dollars and cents may also be used to indicate the number of items and the unit rate. By punching a special key, which causes the machine to print—but not store—the total of the figure, this can be done. For instance, in writing a subscription invoice, the number of subscriptions, together with the rate, are shown in the column immediately following the date. When applied to advertising, these figures are used for the number of column inches and the rate per column inch.

At the extreme right of the machine are five rows of keys used for registering account numbers.

In preparing invoices, the name and address may be printed from an addressograph plate or written on the typewriter. All the data pertaining to the sale is then made on the machine, and the invoice inserted in a window envelope. Subscription invoice forms are perforated so that the subscriber may return the upper part with his remittance. This shows the name, the account number, and assures the proper credit.

## BOOKS

*(Concluded from Page 1, Column 4)*

Leffingwell, W. H.—Making the office pay. A. W. Shaw Co., Chicago, New York, 1918.

Leffingwell, W. H.—Office management. A. W. Shaw Co., Chicago and New York, 1925.

Leffingwell, W. H.—Scientific office management . . . applications of the Taylor system. A. W. Shaw Co., Chicago, New York, 1917.

McClelland, F. C.—Office training and standards. A. W. Shaw Co., Chicago, New York, 1929.

MacDonald, J. H.—Office management. Prentice-Hall, New York, 1927.

McGill, F. E.—Office practice and business procedure. Gregg Pub. Co., New York, Chicago, 1922.

Munn, G. G.—Manual for stenographers and dictaphone operators. Westinghouse Elect. & Mfg. Co., 1923.

Parsons, C. C.—Office organization and management. LaSalle Extension University, Chicago, 1918.

Remington Typewriter Co.—Cutting the cost of stenographic service. Triarts Press, New York, 1914.

Scammell, J. C.—Use of the telephone in business. Ronald Press, New York, 1924.

Schulze, J. W.—Office administration; The American office. McGraw-Hill, 1919.

Shelp, B.—Office methods. H. W. Wilson Co., New York, 1918.

Smith, W. A.—Organization of a small business. 1922.

Stephenson, J.—The modern office. Mathren & Co., London, 1919.

Strumpf, H.—Problems in office practice and business style. Gregg Pub. Co., New York, Chicago, 1922.

Walker, L. C.—Office and tomorrow's business: Modern points of view on office organization and administration. Century Co., New York and London.

Warren, I.—Filing and indexing with business procedure. Rand, McNally Co., Chicago, New York, 1924.

Weaver, A.—Office organization and practice. Ginn & Co., Boston, New York, 1923.

————, How to manage an office, compendium of methods of 93 offices. A. W. Shaw Co., Chicago, New York, 1914.

### OFFICE SUPPLIES

Dicksee, L. R.—Office machinery and appliances. Gee & Co., London, 1928.

Leffingwell, W. H.—Office appliance manual.

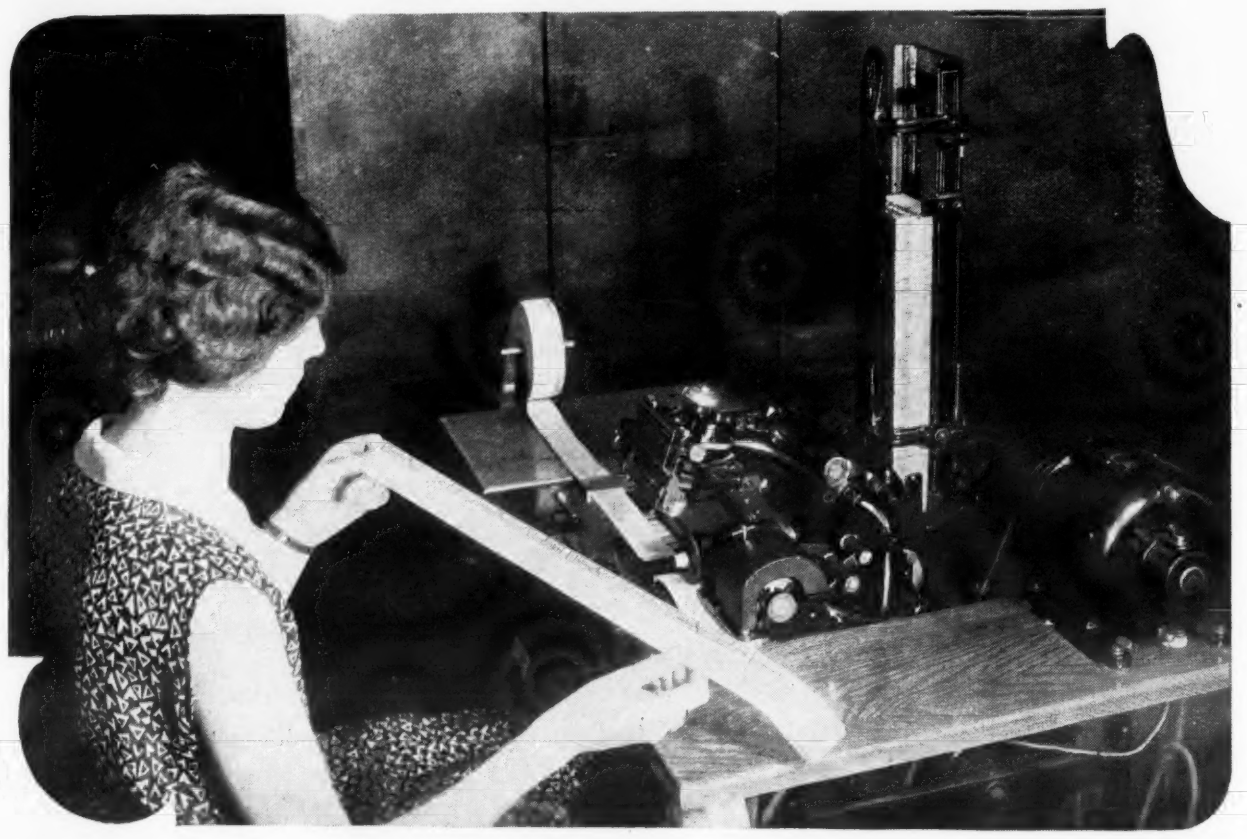
Jackson, V. E.—Labor saving office appliances. Office Appliances Trade Ass'n., 1925.

McCarthy, J. H.—American digest of business machines, combined with the American trade guide of store and office machines; a compendium of makes and models with specifications and principles of operation described and including used machine valuations. J. H. McCarthy, Chicago.

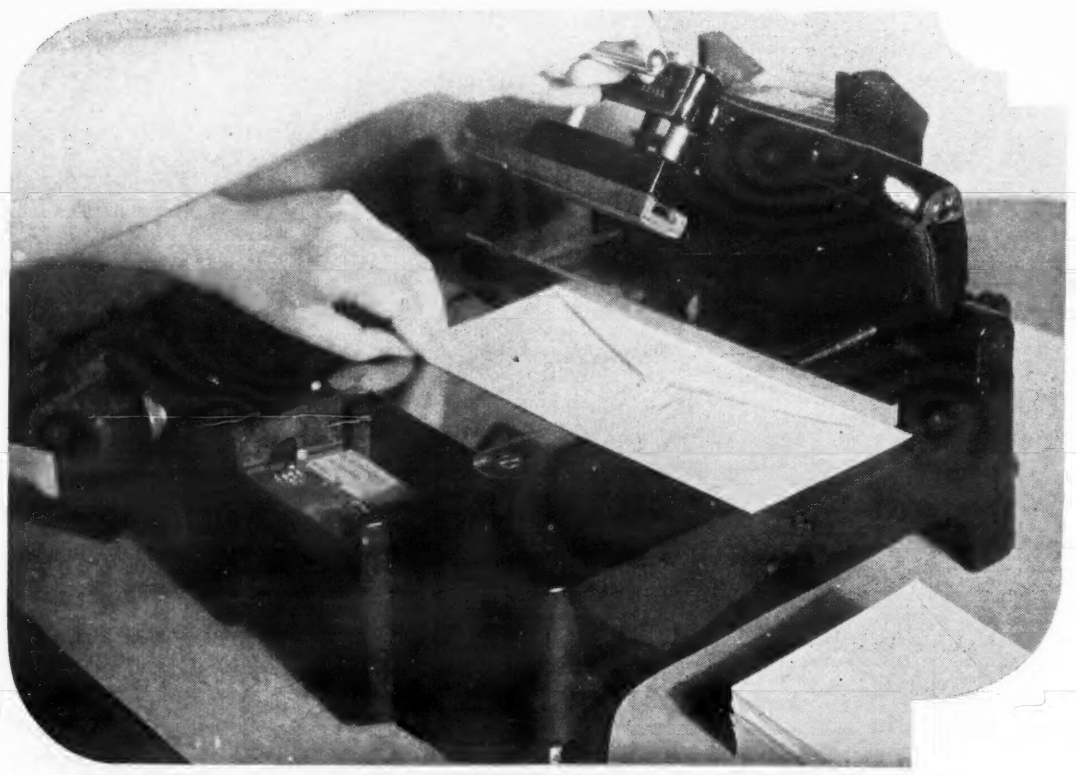
Office Appliances—The magazine of office equipment. G. H. Patterson, Ed., New York, Chicago.

# Correct, Complete Addressing

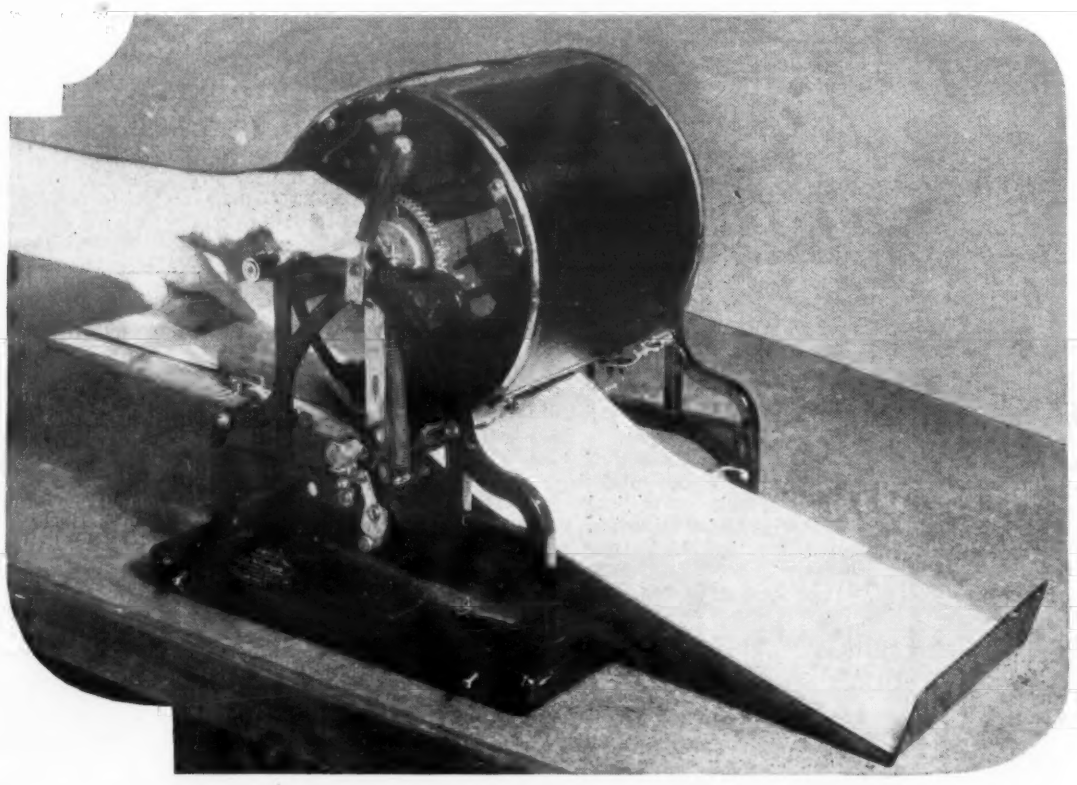
## Key to All Mailing Operations



**Familiar in many offices, the Addressograph (pictured above) is a machine for addressing letters and other material from embossed plates. The girl in the picture is examining the tape of gummed labels which, by means of a unique special attachment, the machine prints for the NEWS to use in mailing. The Addressograph will also address envelopes, fill in multigraphed letters, print filing cards, etc. By means of tabs which can be inserted into the frame of each plate, the machine can be made to select, or skip, all the plates which have been tabbed according to a of each plate, the machine can be made to select, or skip, plates tabbed according to a certain classification.**

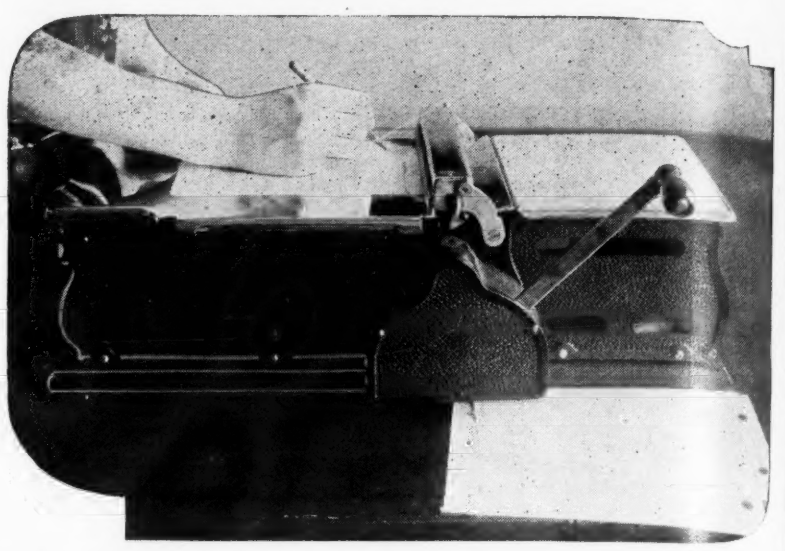


**Hand Addressograph** For the small dealer with comparatively short mailing lists the hand Addressograph fills the bill. It is inexpensive, effective, and occupies little space. The NEWS uses this model for proofing and other operations affecting small groups of plates.

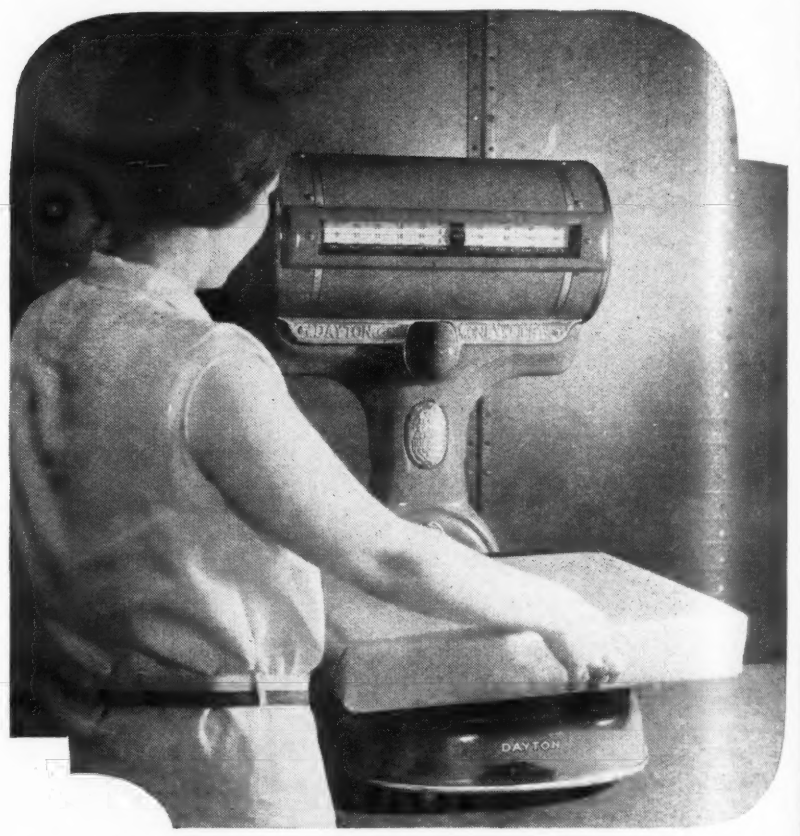


**Inexpensive Duplicator** The Neostyle duplicator shown above is low-priced and is suited to the needs of the small organization. It can be used for form letters, as well as inter-office bulletins.

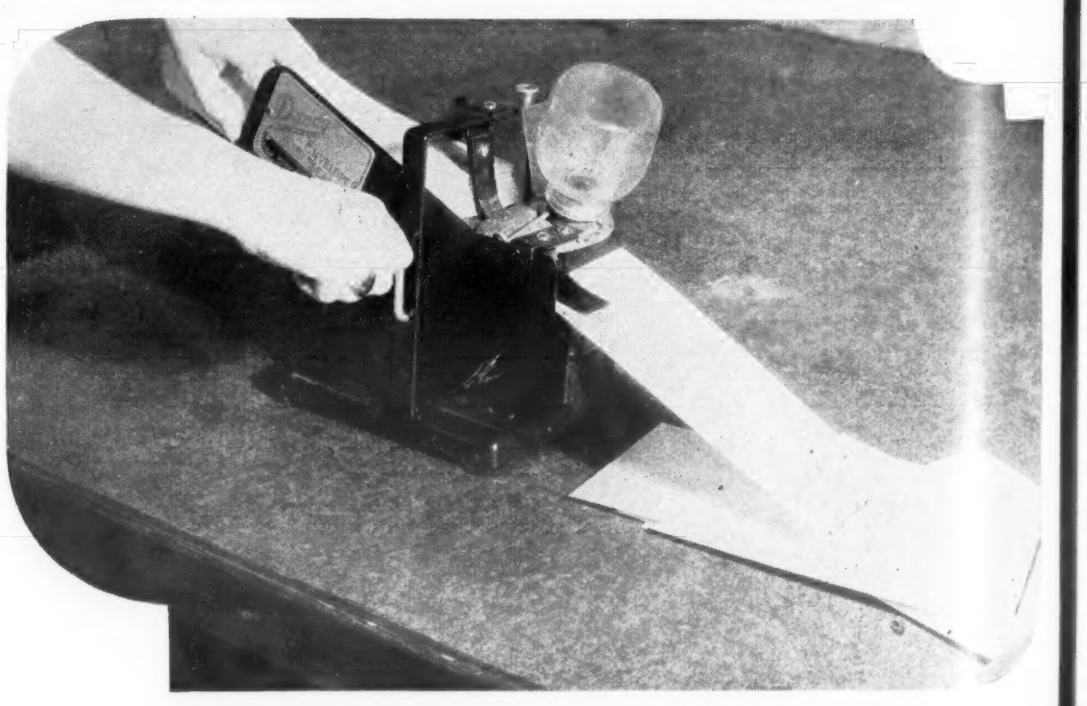
# Time Savers



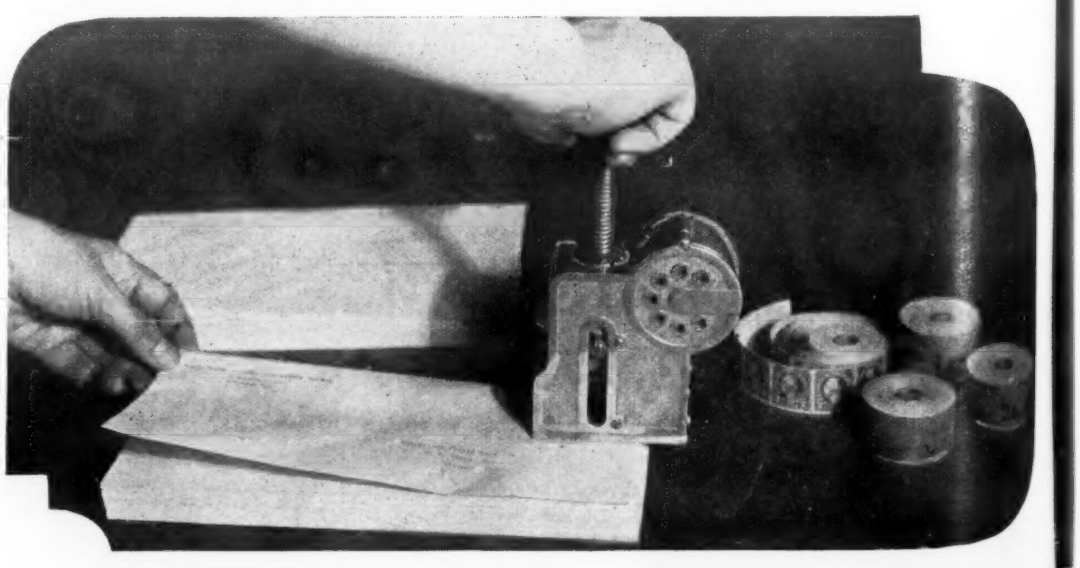
**Sales Register** Orders, requisitions, and the like are written on fan-fold forms in this device. One form is kept by the machine.



**Calculating Mail Scales** If one has the zone of destination in mind, these scales will tell how much postage is needed for parcel post packages.



**Simple Envelope Sealer** This hand-operated envelope sealer costs little and saves time on mailing jobs.



**Letter Stamper** Taking a roll at a time, the device pictured above will moisten, detach, and affix stamps on envelopes or packages.

# OFFICE EQUIPMENT DIRECTORY

## Accounting Machinery (Adding, Calculating, Tabulating, Etc.)

**Marchant Calculating Machine Co.**
(Electric and Hand Drive Keyboard Calculators and Hand Drive Lever Set Calculators)
Oakland, Calif.

**Felt & Terrant Mfg. Co.**
(Comptometer)
1713-1735 N. Paulina, Chicago, Ill.

**Meilicke System, Inc.**
(Adding, Pay Roll, Piece Goods, Lumber, Interest, etc.)
3466 N. Clark, Chicago, Ill.

**Reliable Typewriter & Adding Machine Corp.**
170 W. Washington, Chicago, Ill.

**Victor Adding Machine Co.**
3900 N. Rockwell St., Chicago, Ill.

**Automatic Time Stamp Co.**
(Elapsed Time)
141 Atlantic Ave., Boston, Mass.

**Burroughs Adding Machine Co.**
(Billing, Bookkeeping and Accounting)
6071 2nd, Detroit, Mich.

**Addac Co.**
(Adding and Subtracting)
Grand Rapids, Mich.

**Lightning Calculator Co.**
(7 column)
Grand Rapids, Mich.

**United Accounting Machines, Inc.**
(Listing, Multiplier and Calculator)
St. Louis, Mo.

**Monroe Calculating Machine Co., Inc.**
Orange, N. J.

**Remington-Rand Business Service**
(Adding, Listing, Statement, Bookkeeping)
Remington-Rand Bldg., Buffalo, N. Y.

**Elliott-Fisher Co.**
(Adding, Subtracting, Computing, Bookkeeping, etc.)
1707 Canadian Pacific Bldg., New York, N. Y.

**Ensign Elec. Calculating Machine Co., Inc.**
385 Broadway, New York, N. Y.

**Federal Adding Machines**
(Computing, Listing and Direct Subtracting)
33 E. 21st, New York, N. Y.

**International Business Machines Corp.**
(Accounting, Electric)
50 Broad St., New York, N. Y.

**Tabulating Machine Co.**
(Key Punch, Gang Punch, Electric Key Punch, Automatic Sorting, Counting, Tabulating and Accounting)
50 Broad St., New York, N. Y.

**Underwood Elliott Fisher Co., Inc.**
(Fan Fold)
30 Vesey, New York, N. Y.

**The Todd Company**
(Visible)
1183 University Ave., Rochester, N. Y.

**National Cash Register Co.**
(Accounting, Bank Posting, Sales Analysis, Fare Recording)
Dayton, Ohio

**Ohmer Fare Register Co.**
(For Receiving Departments, Inventories, Stock Records, etc.)
Dayton, Ohio

**Sundstrand Corporation**
(Adding, Calculating, Bookkeeping and Subtracting)
Harrisburg, Pa.

**Barrett Adding Machine Co.**
(Adding, Dividing)
24th and Locust, Philadelphia, Pa.

**Lanston Monotype Machine Co.**
24th and Locust, Philadelphia, Pa.

**Rapid Calculator Co.**
(Non-Listing, Multiplying and Dividing Machines)
American and Cayuga, Philadelphia, Pa.

**Otto P. Schuman**
(Non-Listing, Multiplying and Dividing, Hand and Electric)
7426 Rockwell Ave., Philadelphia, Pa.

**Pittsburgh Typewriter & Supply Co.**
(Pocket Adding)
2370 5th Ave., Pittsburgh, Pa.

**Mechanical Accountant Co.**
(Adding)
17 Warren, Providence, R. I.

## Account Registers and Systems

**Universal Accounting Systems**
839 17th N. W., Washington, D. C.

**Pacific Manifolding Book Co.**
Emeryville, Cal.

**United Autographic Register Co.**
2316 W. 43rd, Chicago, Ill.

**Wirth Salesbook Co.**
4446 N. Knox Ave., Chicago, Ill.

**A. E. Boyce Co.**
Muncie, Ind.

**Morris Register Co.**
Council Bluffs, Iowa

**Embry Register & Sales Book Co.**
711 E. Broadway, Louisville, Ky.

**National Blank Book Co.**
Holyoke, Mass.

**Protection Account Register Co.**
(Fireproof)
4725 Ellery, Detroit, Mich.

**Add-Index Corp.**
(Short Account, Credit Systems)
Grand Rapids, Mich.

**Metzgar Register Co.**
Grand Rapids, Mich.

**National Carbon Coated Paper Co.**
Sturgis, Mich.

**Irving-Pitt Mfg. Co.**
802 Locust, Kansas City, Mo.

**Autographic Register Co.**
(Continuous Form Billing)
Hoboken, N. J.

**American Sales Book Co., Ltd.**
Elmira, N. Y.

**J. G. Shaw Blank Book Co.**
(Check, Draft, Cash and Order)
72 Walker, New York, N. Y.

**Scott Register Co.**
Newbern, N. C.

**McCaskey Register Co.**
Alliance, Ohio

**McBee Binder Co.**
Athens, Ohio

**Globe Register Co.**
2408 Reading Road, Cincinnati, Ohio

**Osborne Register Co.**
(Script, Issuing, Credit)
123 W. Pearl, Cincinnati, Ohio

**Mani-Fold Co.**
(Mani-Fold Forms)
13350-8 Colt Road, Cleveland, Ohio

**McDonald Mfg. Co.**
(Autographic)
5015 Wellesley Ave., Cleveland, Ohio

**Egry Register Co.**
Dayton, Ohio

**Krauth & Benninghofen**
Hamilton, Ohio

**Shelby Salesbook Co.**
Shelby, Ohio

**Kitzmiller & Co.**
Unityville, Pa.

## Addressing and Mailing Machinery

**Western Mfg. & Supply Co.**
(Label Addressing)
247 S. Central Ave., Los Angeles, Cal.

**Pitney-Bowes Postage Meter Co.**
(Prepaid Postage Meter Machines)
Stamford, Conn.

**Addressograph Co.**
(Addressing, Mailing, Hand, Foot or Electric)
901 W. Van Buren, Chicago, Ill.

**Elliott Addressing Machine Co.**
(Addressing)
Cambridge, Mass.

**Standard Mailing Machine Co.**
(Mailing)
Everett, Mass.

**Wing's, Chauncey, Sons**
(Mailing)
Greenfield, Mass.

**Challenge Machinery Co.**
(Addressing and Mailing)
Grand Haven, Mich.

**Remington-Rand Business Service**
Remington-Rand Bldg., Buffalo, N. Y.

**Pollard-Alling Mfg. Co.**
(Addressing)
220 W. 19th, New York, N. Y.

**The Bircher Co., Inc.**
(Mailing)
192 Mill, Rochester, N. Y.

**Multipost Co.**
(Stamp Affixing and Mailing)
51 Center Park, Rochester, N. Y.

**Columbia Postal Supply Co.**
(Postmarking)
Silver Creek, N. Y.

**Jas. H. Matthews & Co.**
(Metal Tag Addressing)
2529 Forbes Field, Pittsburgh, Pa.

**Pannier Bros. Stamp Co.**
207-09 Sandusky St., Pittsburgh, Pa.

## Card Index Systems and Filing Equipment

**Hermann Safe Co.**
(Metal)
Main and Howard, San Francisco, Cal.

**Jenkins-Hall Index Card Co.**
500 Howard, San Francisco, Cal.

**Western Loose Leaf Co.**
310 Vallejo St., San Francisco, Cal.

**H. C. Cook Co.**
(Tabs for Books, Loose Leaf, etc.)
20 Beaver, Ansonia, Conn.

**Sargent & Co.**
New Haven, Conn.

**Rogers Paper Mfg. Co., Inc.**
So. Manchester, Conn.

**National Vulcanized Fibre Co.**
(Fibre)
East Wilmington, Del.

**Delaware Hard Fibre Co.**
(Fibre)
Marshallton, Del.

**American Box & File Co.**
Atlanta, Ga.

**Aurora Metal Cabinet Works**
(Steel)
Aurora, Ill.

**Bentson Mfg. Co.**
(Blue Prints)
Aurora, Ill.

**Durabilt Steel Locker Co.**
515 Arnold Ave., Aurora, Ill.

**Ideal Stencil Machine Co.**
(Stencil Lead)
113 Ideal Block, Belleville, Ill.

**Marsh Stencil Machine Co.**
(Stencils)
100 Marsh Bldg., Belleville, Ill.

**Acme Card System Co.**
(Visible)
116 S. Michigan, Chicago, Ill.

**G. J. Aigner Co.**
(Cloth Lined Tabs)
521 W. Monroe, Chicago, Ill.

**Amberg File & Index Co.**
(Steel, Wood)
1400 Fulton, Chicago, Ill.

**Bankers Box Co., Inc.**
534 S. Clark St., Chicago, Ill.

**Caxton School Supply Co.**
2345 S. LaSalle, Chicago, Ill.

**Chicago Binder & File Co.**
(Loose Leaf)
508 W. 31st, Chicago, Ill.

**Churchill Cabinet Co.**
(Wood)
2119 Churchill, Chicago, Ill.

**Eugene Dietzgen Co., Inc.**
(Blue Print)
166 W. Monroe, Chicago, Ill.

**Eagle Envelope Co.**
415 S. Jefferson, Chicago, Ill.

**Ed. A. Garvey & Co.**
61 W. Wacker Drive, Chicago, Ill.

**Imperial Steel Cabinet Co.**
(Steel)
2140 Fulton St., Chicago, Ill.

**Kohlhaas Co.**
183 N. Dearborn, Chicago, Ill.

**W. G. Lloyd Co.**
(Flexible Sight)
626 S. Clark, Chicago, Ill.

**Meilicke Systems, Inc.**
(Hinged Card)
3466 N. Clark, Chicago, Ill.

**C. F. Pease Co.**
(Blue Print, etc.)
827 N. Franklin, Chicago, Ill.

**Frederick Post Co.**
(Blue Print)
Box 803, Chicago, Ill.

**Wm. E. Pratt Mfg. Co.**
(Wire Bill)
15 W. Lake, Chicago, Ill.

**Ravenswood Office Specialties Co.**
(Inadrawr)
1800 Newport Ave., Chicago, Ill.

**Spurgin Mfg. Co., Inc.**
(Correspondence)
7011 Vincennes Ave., Chicago, Ill.

**Kohler Die & Specialty Co.**
De Kalb, Ill.

**Imperial Methods Co.**
(Card Index, Cooking Receipts, etc.)
Forest Park, Ill.

**Winter Stamping Co.**
(Metal Tabs for Card Systems)
Goshen, Ind.

**Keyless Lock Co.**
(Built to Order Steel)
Indianapolis, Ind.

**Indiana Desk Co., Inc.**
Jasper, Ind.

**Schwab Safe Co.**
(Steel)
Lafayette, Ind.

**Premier Metal Products Co.**
(Metal)
Mishawaka, Ind.

**Steel Fixture Mfg. Co.**
(Steel)
Topeka, Kans.

**Ideal Desk Co.**
Auburn, Maine

**Ames Safety Envelope Co.**
(Expanding Paper)
57 Sudbury, Boston, Mass.

**Dunleavy Co.**
63 Oliver St., Boston, Mass.

**Filing Equipment Bureau, Inc.**
(Vertical)
27 Melcher, Boston, Mass.

**Thorp & Martin Co.**
(Steel)
66 Franklin, Boston, Mass.

**Tileston & Hollingsworth Co.**
(Stock)
213 Congress, Boston, Mass.

**Elliot Addressing Machine Co.**
(Fibre for Addressing)
Cambridge, Mass.

**Doten-Dunton Desk Co.**
Cambridge, Mass.

**George B. Graff Co.**
(Celluloid and Gummed Cloth Tabs and Tags)
54 Washburn Ave., Cambridge, Mass.

**American Pad & Paper Co.**
Holyoke, Mass.

**Highland Mfg. Co.**
Holyoke, Mass.

**Parker Wire Goods Co.**
(Paper)
Worcester, Mass.

**The Macey Co.**
(Steel)
Grand Rapids, Mich.

**Metal Office Furniture Co.**
(Steel)
Grand Rapids, Mich.

**Terrell's Equipment Co.**
(Steel)
Hall and Century, Grand Rapids, Mich.

**Wagemaker Co.**
(Wood)
Grand Rapids, Mich.

**Weis Mfg. Co.**
(Letter, Cap and Invoice, Solid and Sectional, Visible, etc.)
321 Union, Monroe, Mich.

**Browne-Morse Co.**
(Wood and Steel)
Muskegon, Mich.

**The Shaw Walker Co.**
(Card, Wood and Steel)
Muskegon, Mich.

**Feige, Henry & Son**
(Wood)
Saginaw, Mich.

**Witmer Record Co.**
110 W. 19th, Kansas City, Mo.

**S. G. Adams Metalware Co.**
(Steel)
816 N. Garrison, St. Louis, Mo.

**S. G. Adams Co.**
(Metal)
411 N. 6th, St. Louis, Mo.

**Advance Paper Box Co.**
2725 Franklin, St. Louis, Mo.

**Blackwell-Wielandy Co.**
1605 Locust, St. Louis, Mo.

**Bradley Stencil Machine Co.**
(Stencil)
3765 Forest Park Blvd., St. Louis, Mo.

**Con. P. Curran Printing Co.**
Walnut and 8th, St. Louis, Mo.

**Graham Paper Co.**
1014 Spruce, St. Louis, Mo.

**Owens Paper Box Co.**
(Document)
413 N. Main, St. Louis, Mo.

**Ross-Gould Co.**
(Visible Card Index)
309 N. 10th St., St. Louis, Mo.

**Chas. C. Smith**
(Movable and Permanent Tabs, Tags, etc.)
Exeter, Neb.

**The Kay Dee Co.**
Lincoln, Neb.

**Steel Equipment Co.**
(Steel Transfer)
Middlesex Rd., Avenel, N. J.

**Commercial Steel Equipment Co.**
(Steel)
1000 Elizabeth St., Linden, N. J.

**Hano Paper Co.**
80 39th, Brooklyn, N. Y.

**M. Kamenstein**
(Japanned Tin)
135 Pearl, Brooklyn, N. Y.

**Luna Tin Mfg. Co., Inc.**
(Metal Box)
38 Emerson Pl., Brooklyn, N. Y.

**Oxford Filing Supply Co.**
500 Driggs Ave., Brooklyn, N. Y.

**Gerlach Mfg. Co.**
(Letter)
College Point, N. Y.

**Art Metal Construction Co.**
(Steel)
Jamestown, N. Y.

**Postindex Co., Inc.**
(Visible Record)
Jamestown, N. Y.

**Watson Mfg. Co.**
(Metal)
2100 Taylor, Jamestown, N. Y.

**Ulrich Planfiling Equipment Co.**
Jamestown, N. Y.

**C. J. Lundstrom Mfg. Co.**
(Upright, Steel)
Little Falls, N. Y.

**American Clip Co.**
(Desk)
Long Island City, N. Y.

**Acme Letter File Co.**
(Letter)
168 Park Row, New York, N. Y.

**American Envelope Mfg. Co.**
(Expanding, Paper)
23 Howard, New York, N. Y.

**Art Steel Co.**
(Filing, Index, Transfer, etc.)
401 E. 23rd, New York, N. Y.

**Bainbridge, Kimpton & Haupt, Inc.**
218 Greenwich St., New York, N. Y.

**Bogert & Hopper**
(Wood)
223 Varick St., New York, N. Y.

**Chamberlin Supply Co., Inc.**
112 Worth, New York, N. Y.

**E. B. Estes & Sons**
23 Vanderbilt Ave., New York, N. Y.

**Guide System & Supply Co.,**
335 Canal, New York, N. Y.

**Wm. C. Horn Bro. & Co.**
(Desk Files with Pocket Pages)
200 5th, New York, N. Y.

**Kolesch & Co.**
138 Fulton, New York, N. Y.

**Pressteel Engineering Corp.**
(Vertical and Visible)
52 Vanderbilt Ave., New York, N. Y.

**Wilson Memindex Co.**
163 St. Paul, Rochester, N. Y.

**Yawman & Erbe Mfg. Co.**
(Wood and Steel, Letter, Bill, etc.)
Jay & Glide Sts., Rochester, N. Y.

**Joseph S. Caldwell**
Syracuse, N. Y.

**Gaylord Bros., Inc.**
(Catalogue, Filing and Record)
Syracuse, N. Y.

**The O. M. Edwards Co.**
(Steel and Wood)
Syracuse, N. Y.

**Brennan Loose Leaf Co.**
Akron, Ohio

**Berger Mfg. Co.**
(Steel, Document, Card and Index)
1038 Belden Blvd., N. E., Canton, Ohio

**Canton Art Metal Co.**
(Steel)
Canton, Ohio

**Van Dorn Metal Furniture Div. of Berger Mfg. Co.**
1038 Belden Blvd., N. E., Canton, Ohio

**The Brooks Company**
(Visible Loose Leaf Account Card, Indexing)
1249 Superior Ave., Cleveland, Ohio

**Globe-Wernicke Co.**
(Check, Com. Report, Visible Tabs, etc.)
5025 Carthage, Cincinnati, Ohio

**Ohmer, Inc.**
Dayton, Ohio

**Fred J. Meyers Mfg. Co.**
(Paper, Wire, Hook and Stick)
1520 Bender St., Hamilton, Ohio

**W. C. Heller & Co.**
Montpelier, Ohio

**General Fireproofing Co.**
(G. F. Allsteel)
229 Dennick Ave., Youngstown, Ohio

**Kilham Stationery & Printing Co.**
5th and Oak, Portland, Ore.

**Kund Cabinet Co.**
(Wooden Letter, Bill and Document Files)
Bedford, Pa.

**Federal Equipment Co.**
370 No. West St., Carlisle, Pa.

**Corry-Jamestown Mfg. Corp.**
(Steel)
650 W. Main St., Corry, Pa.

**Columbia Steel Equipment Co.**
(Steel)
1733 Chestnut St., Philadelphia, Pa.

**J. R. Dawson Mfg. Co.**
(Wire)
7400 Tabor St., Philadelphia, Pa.

**Keystone Index Card Co.**
3225 Raw, Philadelphia, Pa.

**National Fiberstock Envelope Co.**
427 Moyer, Philadelphia, Pa.

**Parent Metal Products Co., Ltd.**
(Blue Print, Card, Steel)
340 No. Lawrence St., Philadelphia, Pa.

**John E. Sjostrom Co., Inc.**
(Stencil, Library, etc.)
1719 25 N. 10th, Philadelphia, Pa.

**Standard Index Card Co.**
(Celluloid)
701 Arch, Philadelphia, Pa.

**Stiffel-Freeman-Prentzel Safe Co.**
732 Chestnut St., Philadelphia, Pa.

**F. Weber Co., Inc.**
(For Plans)
1220 Buttonwood, Philadelphia, Pa.

**Aluminum Co. of America**
(Aluminum Tabs)
2449 Oliver Bldg., Pittsburgh, Pa.

**Autodex Company**
Waynesboro, Pa.

**Automatic File & Index Co.**
(Steel)
10th Ave., Green Bay, Wis.
(Desk and Receipt)
(Desk and Recipe)
Green Bay, Wis.

**Invincible Metal Furniture Co.**
(Sheet, Steel)
Manitowoc, Wis.

**Findex Co.**
(Self-Finding)
Milwaukee, Wis.

**Stationers Looseleaf Co.**
(Flexipost Binders)
Milwaukee, Wis.

**Hamilton Mfg. Co.**
(Blue Print)
Dept. W, Two Rivers, Wis.

## Check Protectors

**American Perforator Co.**
627 W. Jackson Blvd., Chicago, Ill.
(Hand and Motor Driven)

**Checkometer Co.**
431 S. Dearborn, Chicago, Ill.

**Hedman Mfg. Co.**
1158 Center, Chicago, Ill.

**Securograph Pen Co.**
Mt. Carmel, Ill.

**R. H. Smith Mfg. Co.**
Springfield, Mass.

**Cushman & Devison Mfg. Co.**
109 Leonard St., New York, N. Y.

**Stewart & Co.**
82 Duane St., New York, N. Y.

**Hall-Welter Co.**
183 St. Paul St., Rochester, N. Y.

**The Todd Co.**
1183 University Ave., Rochester, N. Y.

**Safe-Guard Check Writer Corp.**
Lansdale, Pa.

## Dictating Machines

**Dictaphone Sales Corp.**
Graybar Bldg., New York, N. Y.

**Thomas A. Edison, Inc.**
"Ediphone" Division, Orange, N. J.

## Duplicators

**Addressograph Co.**
901 W. Van Buren St., Chicago, Ill.

**A. B. Dick Co.**
720 W. Jackson Blvd., Chicago, Ill.

**Ditto, Incorporated**
Harrison at Oakley Blvd., Chicago, Ill.

**Heyer Duplicator Co., Inc.**
911 W. Jackson Blvd., Chicago, Ill.

**U. S. Duplicate Co.**
622 W. Lake, Chicago, Ill.

**Duplico Mfg. Co.**
New Brunswick, N. J.

**American Machine & Foundry Co.**
5522 2nd Ave., Brooklyn, N. Y.

**Beck Duplicator Co.**
434 Broadway, New York, N. Y.

**Felix F. Daus Duplicator Co., Inc.**
34 W. Houston, New York, N. Y.

**Graphic Duplicator Co.**
270 Lafayette, New York, N. Y.

**Photostat Corp.**
295 State St., Rochester, N. Y.

**Globe Register Co.**
2408 Reading Rd., Cincinnati, Ohio

**American Multigraph Sales Co.**
E. 40th and Kelly Ave., Cleveland, Ohio

**Rotospeed Co.**
Dayton, Ohio

**Pittsburgh Typewriter & Supply Co.**
Dept. H, 337 5th Ave., Pittsburgh, Pa.

**Multistamp Co., Inc.**
Norfolk, Va.

## Inter-Office Telephone Systems

**Dictograph Products Co.**
224 W. 42nd St., New York, N. Y.

**Western Electric Co.**
Graybar Bldg., New York, N. Y.

## Typewriters

**Teletype Corporation**
(Telegraph)
1400 Wrightwood Ave., Chicago, Ill.

**Woodstock Typewriter Co.**
(Standard and Electric)
35 E. Wacker Drive, Chicago, Ill.

**Remington-Rand Business Service**
Remington-Rand Bldg., Buffalo, N. Y.

**L. C. Smith Typewriter Co.**
51 Madison Ave., New York, N. Y.

**Oliver Typewriter Sales Co., Inc.**
82 Duane, New York, N. Y.

**Royal Typewriter Co.**
316 Broadway, New York, N. Y.

**Underwood Elliott Fisher Co., Inc.**
(Portable and Standard)
30 Vesey, New York, N. Y.